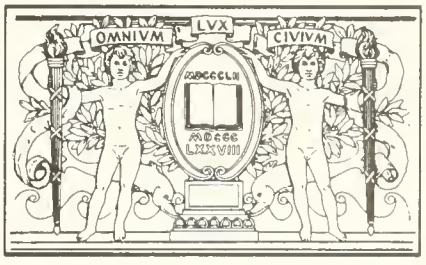

Inner Harbor Ferry Feasibility Study

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Submitted to:
The Boston Redevelopment Authority

Developer:
HBC Associates (Fan Pier)

Fan Pier

Executive Summary

Inner Harbor Ferry Feasibility Study

Prepared for the Boston Redevelopment Authority

March 1987

Preface: The ongoing process of renovation and development along Boston's waterfront marks the reemergence of the Inner Harbor as a focus for commerce and recreation in the city and metropolitan area. Along with these redevelopment efforts is a growing body of state policies and recommendations that require a variety of water-dependent uses for developments based at the water's edge.

Ideally, the Inner Harbor can become a commercial and transportation, as well as recreational, center. A small but growing number of commuters, for instance, are recognizing the value of water transportation as an alternative means of traveling to the downtown area. Historically, water transit systems have developed here along specific routes to meet specific needs (such as the Hingham commuter and airport shuttle services). An expanded and more sophisticated water transportation system can add a new dimension to the harbor's importance to the city and the entire region. It can serve the growing needs of commuters, as well as providing new possibilities for tourists, visitors, shoppers and residents. The Fan Pier development is committed to helping improve water transit services as a prime element of the site's use.

Aims: The Fan Pier development will depend in large measure on its waterfront. A marina and canal are central features of the project as planned. The developers also recognize that there is even greater potential for expanded water-dependent uses and are exploring the feasibility on the site. Therefore, they are committed to two major contributions to the success of the future of water transportation in Boston's harbor.

The first major component is this study: a planning analysis and feasibility study which offers a possible solution to water transportation needs, linking sites in the downtown and outlying areas.

Second, the developers will create and manage dock and landside facilities on site which can support ferryboats, water taxis and other means of water transit.

Specific Recommendations: This study offers a system design and cost study for commuter and cultural boat services, as well as initial analyses of a North Shore commuter link via

water. These services can be accommodated by the boat dock planned for the Southwestern corner of the Fan Pier site where the present commercial boat operation is expected to continue. (An airport water shuttle is planned to operate from a dock in the marina adjacent to the Fan Pier hotel.) As outlined here, these services would operate similarly to existing transportation services.

While the feasibility study is still being reviewed by state officials and private water transportation operators, the following preliminary conclusions emerge from this analysis:

- Three main types of water transportation services are not currently offered in the Inner Harbor:
  - express service between the North Shore and the downtown;
  - service to the downtown waterfront from residential developments and land transit nodes; and
  - multi-stop, off-peak service to cultural sites.
- These three needs can be met with multiple combinations of boat sizes, headways and routes, but an aggressive marketing strategy must be developed by the responsible public agency to insure public use.
- Several appropriate ferryboat landings are being created already at harborfront sites, such as Long Wharf, Clippership Wharf, the Charlestown Navy Yard and, of course, the planned Fan Pier site. For other sites (e.g., North Station), additional planning is needed.
- Waterside services, such as the ferryboats themselves, should be provided by private boat operators; landside facilities, such as docks, enclosed waiting areas, etc., should be the responsibility of the individual site developers.

- Oversight of ferryboat facilities and operation should be in the hands of a specified public agency.

Conclusions: Public comment and review will continue to mold the final shape of an Inner Harbor ferry service. Critical decisions concerning boat sizes, schedules, fleet size and fare structure will result from this review process. The Fan Pier developers are committed to continued coordination with public and private entities as future water transportation systems are formulated. A sophisticated, effective water transportation system is a real possibility. Such a system could complement the city's waterfront development by mitigating peak period traffic, by providing a special transportation service for tourists, shoppers, and other visitors, and by providing one of the few opportunities to view the city from the water.

Fan Pier Development

INNER HARBOR FERRY FEASIBILITY STUDY

Developer:
HBC Associates

Prepared by:
Skidmore, Owings & Merrill

Submitted to:
The Boston Redevelopment Authority

NOTE: This report is presented to the Boston Redevelopment Authority in DRAFT form to indicate the status of work in progress. Additional technical review by Skidmore, Owings & Merrill is underway, and such review is being assisted by Vanasse/Hangen/Brustlin Associates, Parsons, Brinckerhoff, Quade & Douglas, and Waterfront Design Associates. The final form of the work will be presented to the BRA, to the Boston Department of Traffic and Parking, to the Massachusetts Executive Office of Environmental Affairs, to the Executive Office of Transportation and Construction, to the Massachusetts Department of Environmental Quality Engineering, to private boat operators in Boston Harbor, and to other interested parties for review and comment.

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FIGURES

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I. INTRODUCTION

This report examines the feasibility of a potential Inner Harbor Ferry system connecting public transportation nodes and cultural attractions along Boston's waterfront. As examined, this Inner Harbor Ferry would complement the city's burgeoning waterfront development by mitigating peak period traffic, by providing a special transportation service for tourists, shoppers, and other visitors, and by providing one of the few opportunities to view the city from the waterside. This study has been conducted for the developer of the Fan Pier Development as part of its investigation of possible water dependent operations that might take advantage of maritime facilities being incorporated into the project design.

The ongoing process of development and renovation of the extensive and underutilized parcels along Boston's waterfront affirms the reemergence of the Inner Harbor as a focus for commerce and recreation in the city and the metropolitan area. Complementing these redevelopment efforts is a growing body of state policies and recommendations requiring that a variety of water dependent uses be incorporated into the plans for land-based developments at the water's edge.

Ideally, the Inner Harbor environment can be utilized for commercial and transportation, as well as recreational purposes. A small but growing percentage of downtown workers are recognizing the value of water transportation. More than a mere temporary or seasonal novelty, commuter transportation over sea rather than land is a water dependent use that provides one alternative to more conventional transportation modes.

Historically the water transportation systems put into operation in Boston's Inner Harbor have been focused on solving very specific transportation needs and have, therefore, very specific routes (such as the Hingham commuter and the airport shuttle services). The Inner Harbor Ferry, as presented here, would be a more flexible system designed to connect with a variety of transportation services. Thus, this system would act as a link to, rather than a substitution for, existing public transportation systems.

This system and cost feasibility analysis is organized into six chapters, of which this introduction is the first. The second chapter outlines the current status of Boston's water transportation systems. In the third chapter, the components of an Inner Harbor Ferry system are presented and analyzed--considering landside as well as waterside facilities, routes, and vessel choices. The fourth chapter presents the financial analysis conducted for the Inner Harbor Ferry to determine the fleet size, breakeven fare range, and financing structures. Chapter five is an initial overview of a potential North Shore commuter service, which has been suggested by some Boston boat operators as an additional Harbor system worth exploring to get commuters out of their cars before they enter the city. The final chapter presents summary conclusions drawn from the overall study.

II. BOSTON HARBOR WATER TRANSPORTATION

EXISTING WATER TRANSPORTATION

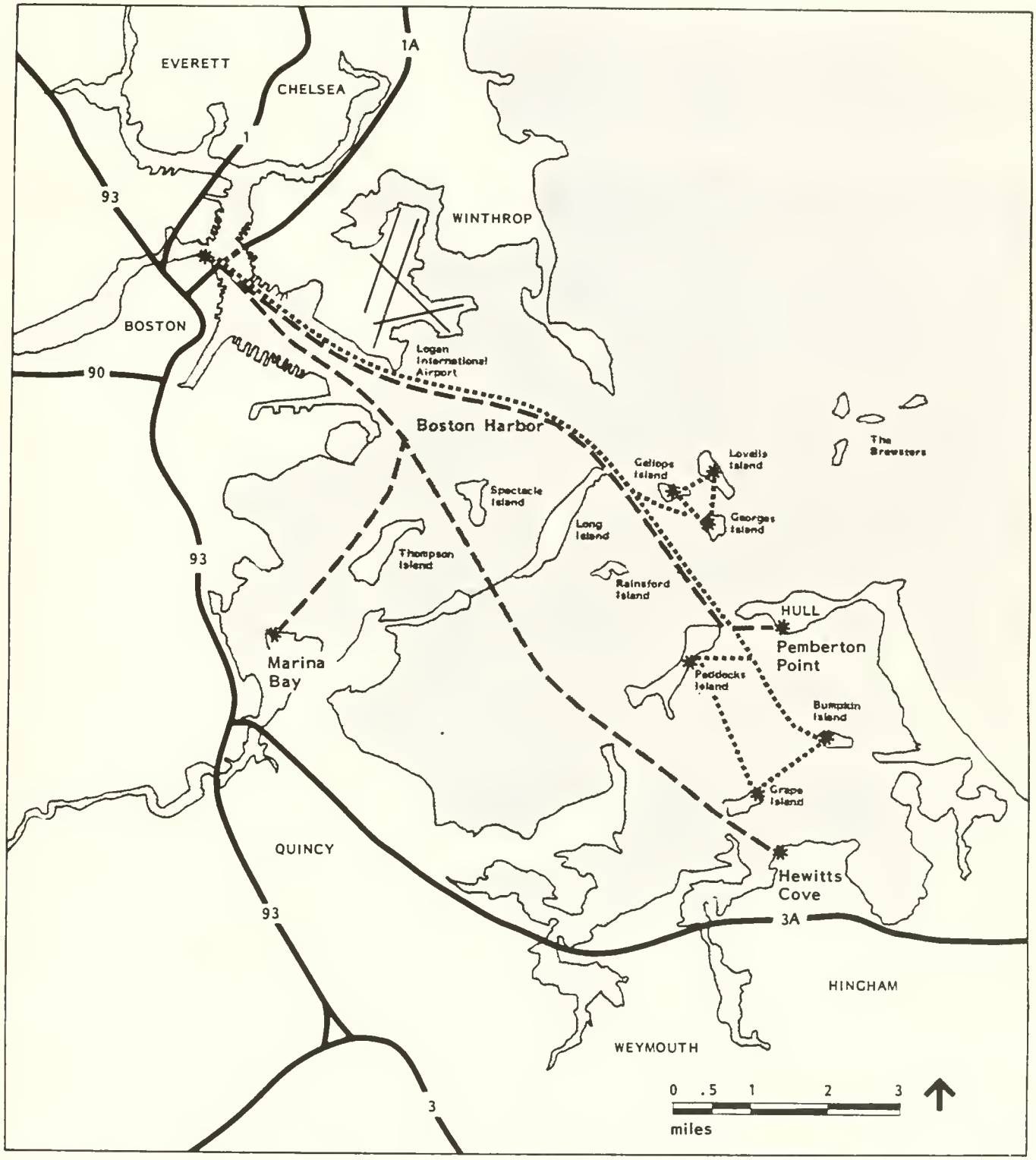
Allowing for seasonal operating schedules, four types of water transportation services are currently available to or within Boston's Inner Harbor. Although these systems often have different purposes, facilities, and markets, elements from each could help structure and direct the establishment of an Inner Harbor Ferry system. Figure II-1 identifies the existing area water transportation terminals and routes. Figure II-2 provides additional detail on the downtown landings and routes.

■Commuter Transportation

As of December 1986, four local boat operators were offering commuter service from various South Shore locations to docks in the Inner Harbor: (1) Boston Harbor Commuter Service and (2) Mass Bay Lines, Inc. operate between the Hingham dock in the Hingham Shipyard on Route 3A and Rowes Wharf; (3) Bay State-Spray & Provincetown Steamship Company runs from Pemberton Point in Hull to Long Wharf; and, (4) the Harbor Crossing Company service connects the Marina Bay Development in Quincy to Rowes Wharf, Long Wharf, and Commonwealth Pier.

Modern commuter boat service in Boston Harbor has been in operation since 1979. This has been a period of rapid expansion in service and ridership and continued upgrading of the needed facilities. With the four operators making a total of 19 round trips each weekday between three South Shore locations and the downtown, (May 19 - December 1, 1986 schedule), approximately 1600 commuters were carried round-trip each day during the summer. Ridership figures drop off to 1200 passengers per day in the fall, winter, and spring months.

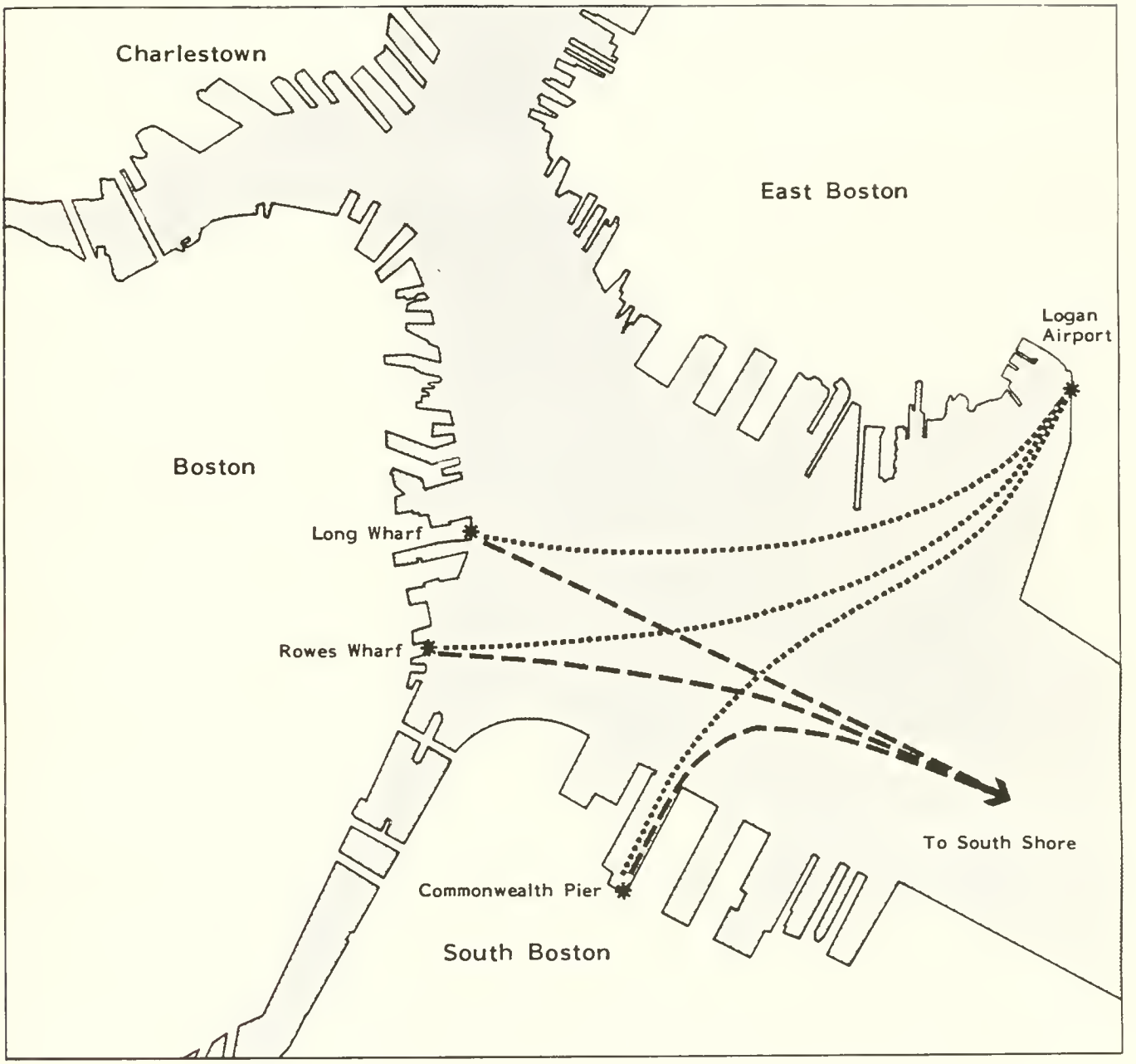
FIGURE II-1
Area Water
Transportation
Terminals and
Routes



..... Excursion Routes

— — — Commuter Routes

FIGURE II-2
Downtown Water
Transportation
Terminals and
Routes



■Airport Water Shuttle

In July 1985, Massport introduced an airport water shuttle service across the Inner Harbor to three downtown locations. Buses, scheduled to meet the boat service, transport passengers between the shuttle dock at Bird Island Flats and the Logan Airport terminals. Operation is seasonal and operated in 1986 from May 19 to December 1 with a one-way fare between the downtown and Logan of three dollars. Ridership during 1986 was totalled at 350,000 passengers, an increase of 135% over the 1985 figures.

While the majority of the 35 daily trips stop at Rowes Wharf, a small number land at Commonwealth Pier or Long Wharf. During the summer of 1986, improved facilities at Massport's Bird Island Flats landing were completed, including a covered waiting area and expanded dock. Massport is expected to increase the frequency of service to the airport as additional waterfront developments are constructed. Developers of waterfront projects are also talking with Massport about the possibility of landing rights for hotel-operated, water shuttles and taxis at the Bird Island Flats' dock.

■Harbor Islands Transportation

Three operators (Bay State-Spray & Provincetown Steamship Company, Mass Bay Lines, Inc., and Boston Harbor Cruises) conduct excursion trips between Georges Island and either Rowes Wharf or Long Wharf downtown. During the spring, summer, and fall months, ten trips on weekdays and eleven trips on weekends are scheduled. A limited number of these runs stop at Peddock's Island, while others stop at the U.S.S. Constitution site in the Charlestown Navy Yard. An inter-island taxi service, run by the Department of Environmental Management, operates between excursion docks in the Boston Harbor Islands State Park, which consists of Georges, Lovells, Gallops, Peddocks, Bumpkin, and Grape Islands.

■Cruises and Charters

Four operators (A.C. Cruise Line, Bay State-Spray & Provincetown Steamship Company, Boston Harbor Cruises, and Mass Bay Lines, Inc.) provide cruise and charter services from Boston Harbor. Options range from local Inner Harbor/South Shore cruises and concert and dinner cruises to special occasion charters. Longer cruises include trips to Gloucester and Provincetown, and whale watches.

OVERNIGHT AND SERVICING LOCATIONS

Several servicing and layover locations are available to operators, depending on the size and needs of the individual vessels. The following is a summary of the locations currently used by vessel owners operating in Boston Harbor:

- Hewitt's Cove, Hingham is used by Boston Harbor Commuter Services and Mass Bay Lines, Inc. for storage.

- Charlestown Navy Yard is the fueling and maintenance site for Boston Harbor Commuter Services.

- Rowes Wharf is the weekend storage location for the Mass Bay Lines boats, as well as the fueling, maintenance, and servicing location for these boats.

- Long Wharf, the primary downtown terminal, is both the storage and maintenance location for the Bay State and Boston Harbor Cruises vessels.

- Marina Bay docks and services the Marina Bay Commuter boat.

- Fan Pier is the permanent location for the A.C. Cruise Line vessel.

- Commonwealth Pier is a seasonal storage site for the Bay State boats.

- An additional location for repair and service is planned at the former East Boston Shipyard, which was recently purchased from Massport by a private party for the development of a commercial boat maintenance facility.

III. INNER HARBOR FERRY

OVERVIEW OF SYSTEM

This section of the Inner Harbor Ferry Feasibility Study describes the components of an Inner Harbor Ferry service. As a result of the design and review process completed to date, three primary objectives have been identified to direct efforts towards a water transportation system serving downtown developments, and the Fort Point Channel area of South Boston:

- o Alleviation of local and downtown traffic congestion during peak commuter hours,
- o Encouragement and incentive for use of the existing public transit system by workers along the waterfront, and
- o Promotion of the full range of land-based and water-related opportunities along the Boston harborfront.

■ Inner Harbor Ferry

As a potential service that could use the existing or planned transportation facilities incorporated into waterfront projects, the Inner Harbor Ferry explored here will support the attainment of all three of these goals. During peak hours, the system routes will be designed to connect with frequently used public transportation stops. As an additional link in the existing commuter transportation system, the ferry will provide the needed connection between the downtown and less accessible waterfront sites. During off-peak hours, the system can be modified, in terms of scheduling, to reflect the needs of the non-commuter riders. Unlike the water transportation systems

already in place, the Inner Harbor Ferry route will provide both the frequency of commuter service and the tourist appeal of an excursion service.

The following sections examine the selection process for the landings that were included in the Inner Harbor Ferry system studied.

FERRY LANDINGS

Important to the operation of the Inner Harbor Ferry system will be the extent of landside and docking facilities. Final decisions made for each of the proposed locations will, to a degree, determine the eventual capacity of th system, the boat size, route, and cost.

The successful implementation of the Inner Harbor Ferry service hinges on a number of interrelated variables. Each ferry destination must be well planned and equipped to handle the expected passenger flow year-round. Also, the appropriate vessels need to be identified either from among those in operation in Boston now, or from other options. Finally, this system cannot be designed in a vacuum, but will need to be coordinated with the entire Boston Inner Harbor water transportation system as it continues to expand.

This study outlines the numerous choices currently available for each component of an Inner Harbor Ferry operation. As the implementation schedule of landings associated with waterfront projects becomes more concrete, more detailed decisions concerning feasibility and coordination can progess.

■Landing Criteria

In determining the basic routes to be used by the Inner Harbor Ferry, three basic requirements for the potential landings were established and considered:

- o the existence of potential for landside facilities by the commencement of system operation,
- o availability of existing or proposed public transit connections (such as rapid transit stations) in close proximity to the designated ferryboat stops, and
- o over-land distance from each stop to cultural attractions to encourage use by off-peak riders and tourists.

Starting with a list generated by the Boston Redevelopment Authority (BRA) of future water transportation terminals and facilities, each potential site was evaluated for its satisfaction of the above requirements. After initial elimination of the most

clearly unusable sites, a short list of six landings was created, including: Fan Pier, South Station, Long Wharf, and North Station downtown; Pier 1 or Pier 4 in the Charlestown Navy Yard; and Clippership Wharf in East Boston. These landings were found to best satisfy the above criteria. Each of these landings is noted on Figure III-1, and a discussion of their appropriateness to the proposed system follows.

FORT POINT CHANNEL AREA/ SOUTH BOSTON LANDING

■ Fan Pier Development

Occupying 16.3 acres of land and 2.6 acres of water on the northwestern corner of South Boston, the Fan Pier Development site commands an impressive location along the Fort Point Channel and Inner Harbor waterfronts, as shown in Figure III-2. The Fan Pier, and the adjacentand concurrently planned development for Pier 4, together incorporate a total of 4.6 million square feet of office, retail, hotel, and residential uses. Complementing these mixed uses, and as part of the developers' efforts to revitalize the waterfront and to acknowledge those uses historically found on the waterfront, the development plans include a varied program of water dependent uses, as outlined in the Final Environmental Impact Report and shown in Figure III-3.

Four facilities for potential use by commercial boat operations are currently planned as part of the dockage at the Fan Pier and Pier 4 Developments. A dock in the marina, directly outside the Fan Pier hotel waterside entrance will be available for airport water shuttle service. This dock will be designed to accommodate boats currently in service between Logan and the downtown. The Pier 4 developers have designed a landing facility adjacent to the public plaza and the Pier 4 hotel from which they will operate an on-demand water taxi to a variety of Inner Harbor locations. In addition, Pier 4 has designed the breakwater at the mouth of its marina to accommodate coastal cruise ships. The fourth water transportation facility under consideration is the 260 linear foot dock and related outdoor and enclosed landside facilities at the southwest corner of the Fan Pier site. This dock is being reserved for commuter use, including such systems as the Inner Harbor Ferry that is the subject of this study.

■ Docking Facilities

The Final EIR included plans for a designated ferry boat dock located at the southwestern corner of the Fan Pier site, adjacent to the Old Northern Avenue Bridge. As the plan in Figure III-4 shows, the location of the proposed dock is well situated to provide access to Northern Avenue, the Northern Avenue Bridge and other Fort Point Channel sites, as well as the Fan Pier and Pier 4 Developments. Although other systems might

FIGURE III-1
Proposed
Inner Harbor
Ferry Stops

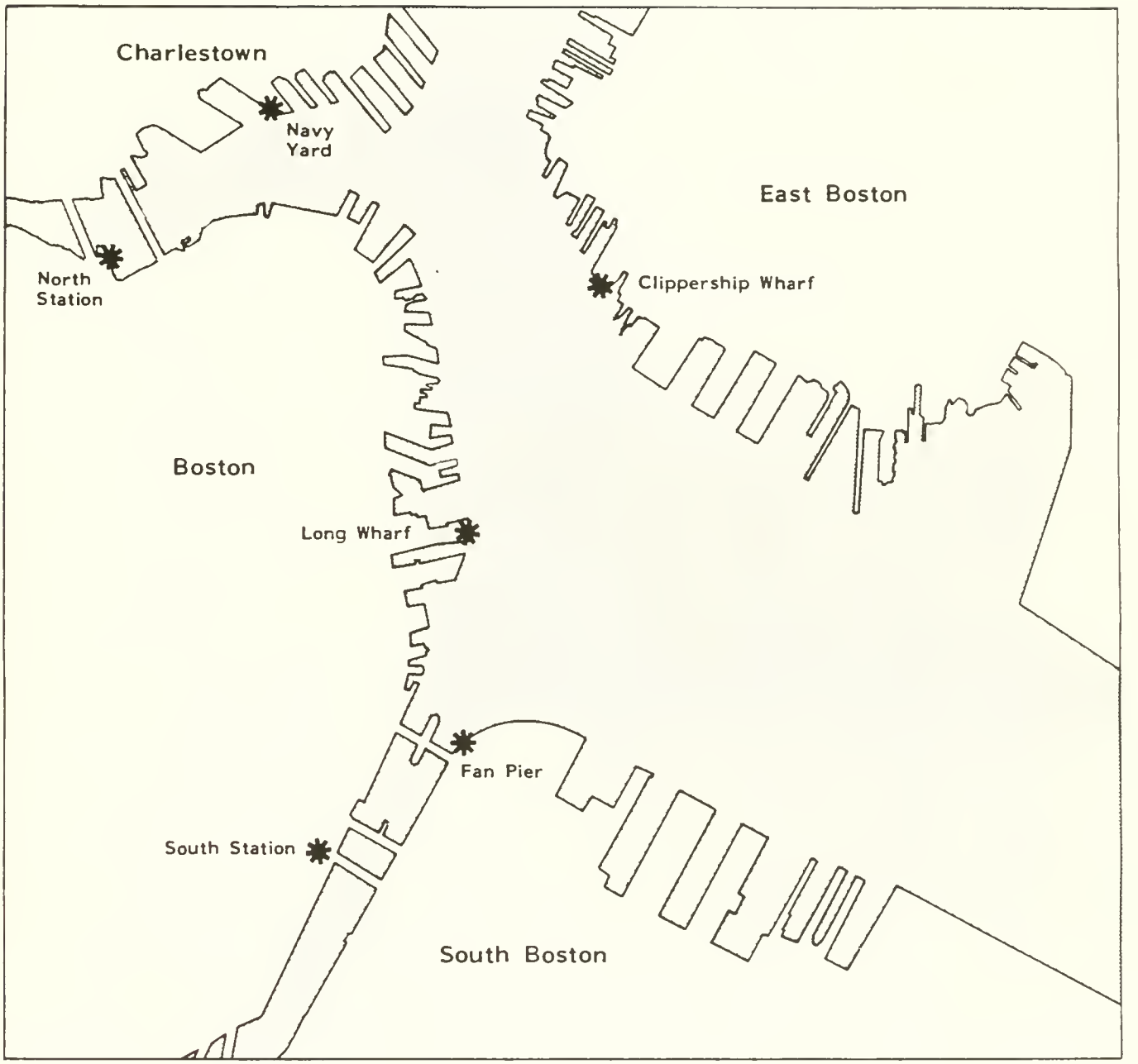


FIGURE III-2
Fan Pier
and Pier 4
Developments

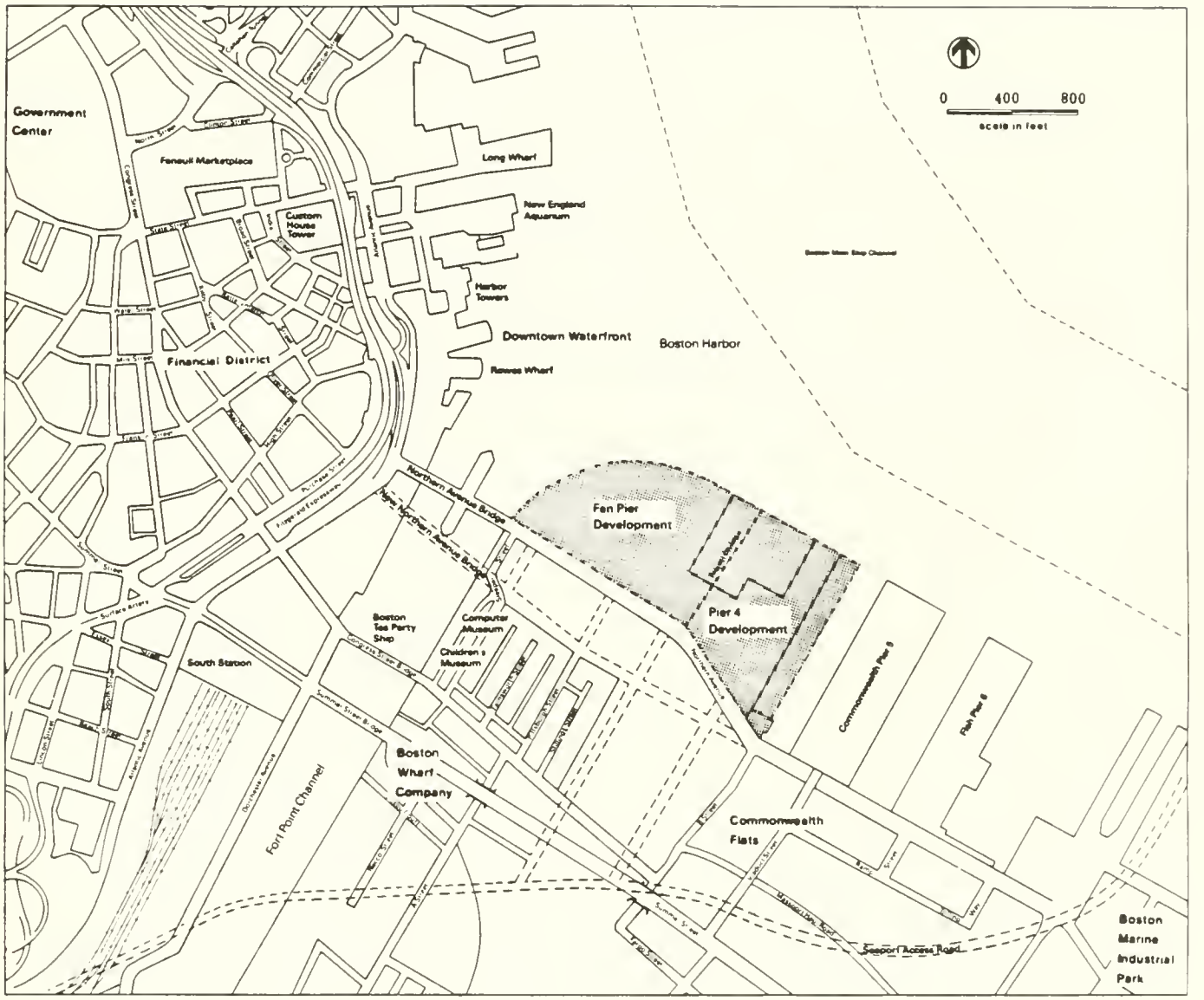


FIGURE III-3
Fan Pier and
Pier 4 Water
Dependent Uses

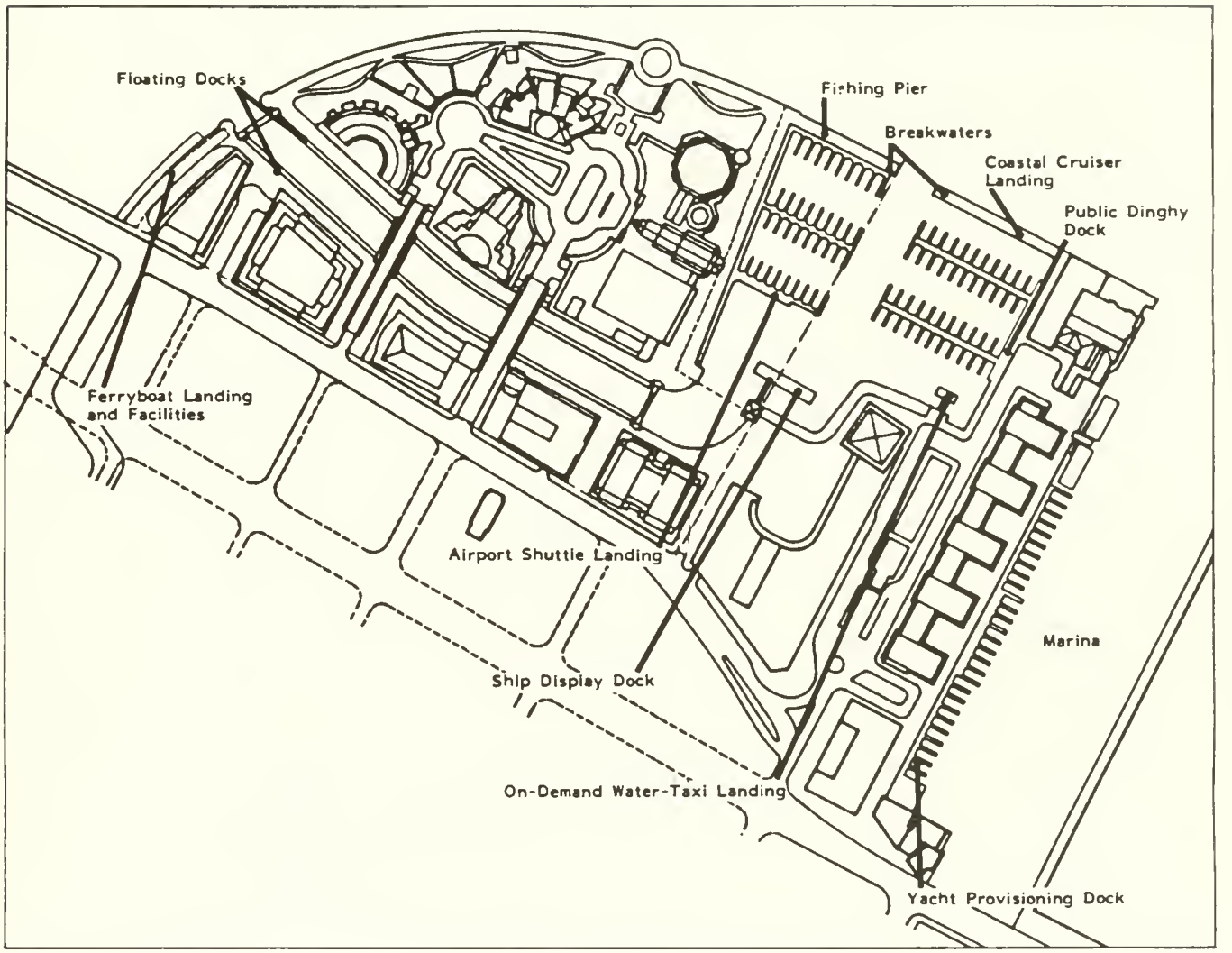
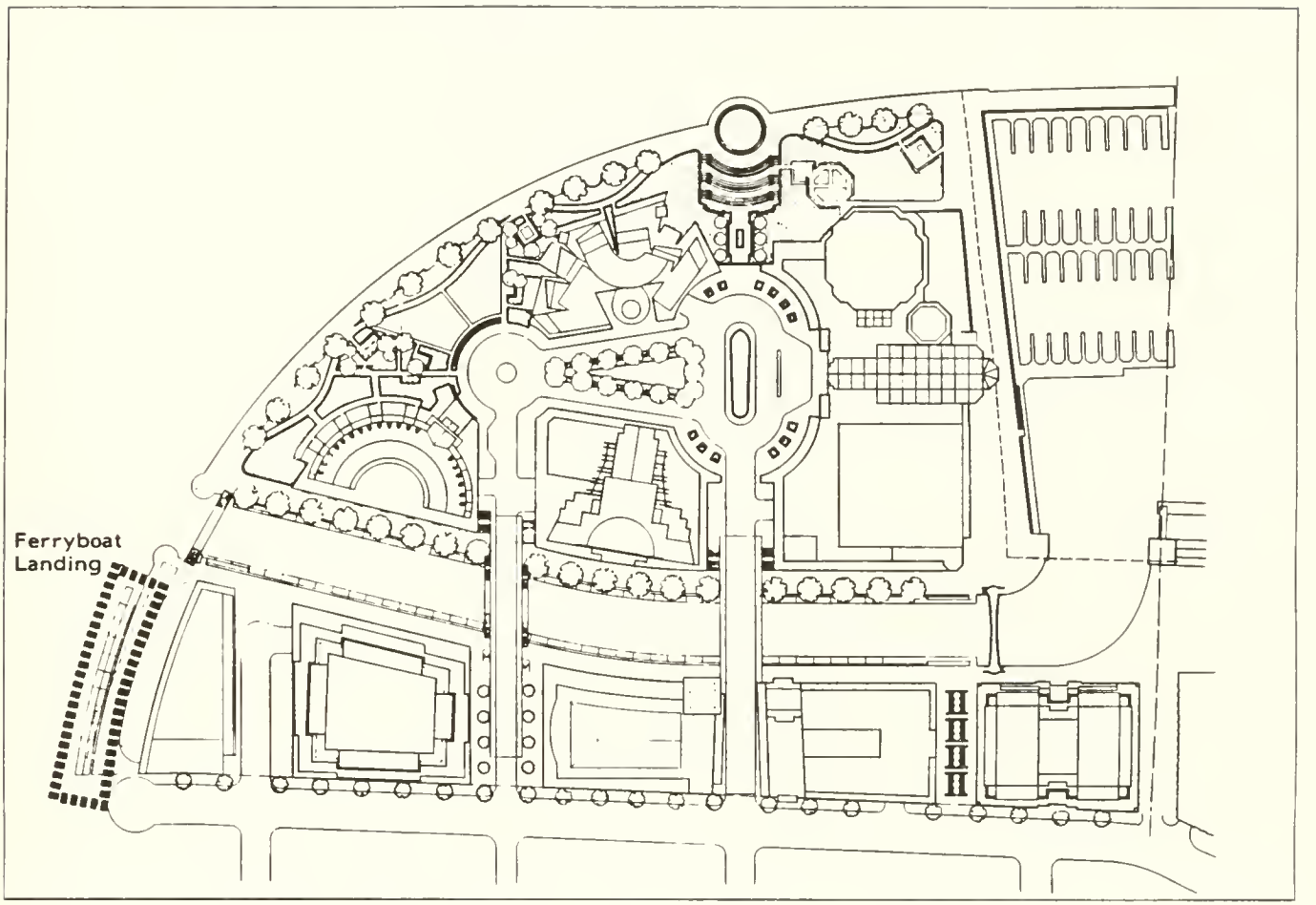


FIGURE III-4
Location of
Proposed Fan
Pier Ferryboat
Landing



potentially use the commercial dock, this study considers this landing as a good location for an Inner Harbor Ferry stop.

The existing dock currently accommodates a single excursion boat, the Virginia C., and a tugboat, the Joseph C. Luna, both used by A.C. Cruise Line, Inc., an excursion and whale watching operation. (See Figure III- 5.) Current Fan Pier Development plans indicate that A.C. Cruises will continue to dock the Virginia C. or its replacement in its present location, after the facilities have been upgraded.

The existing 200 linear foot dock will be completely rebuilt with 260 linear feet of dock space, adequate to handle two or three boats of varying freeboard at any one time. It is estimated that the A.C. Cruise Line operation will utilize approximately 100' of this total space, leaving 160' for the Inner Harbor Ferry operation. Two-way railed gangways and gangway platforms will connect the dock to the pier perimeter.

■ Landside Facilities

Landside support facilities to support the ferryboat landing will be provided on the first level of the cultural building to be built on Northern Avenue, approximately 60 feet from the dock area. Approximately 3,000 square feet inside the cultural building has been set aside to house a variety of marine and passenger services. For boat operators, food preparation and storage, trash disposal, and essential maintenance needs will be accommodated in the lower levels. Ferry passengers may use all the public facilities in the building, including public restrooms and phones.

Included in the marine service space designated in the cultural building will be, according to current designs, a total of 1,050 square feet of indoor waiting area. Using a design standard of 7 square feet per person (similar to those used in planning for bus or rapid transit passengers), the ferry dock would allow space for 150 waiting passengers. Outdoors, approximately 17,500 s.f. of Harborwalk area adjacent to the dock will be designated as ferry waiting area.

Although these facilities are still in the conceptual design stage, Figure III-6 shows the ground floor plan of the cultural building as currently planned, including the indoor waiting area.

Finally, provision for vehicle turn-around and drop-off space adjacent to the ferry dock was considered in the design of this area of the Fan Pier. The proposed Old Northern Avenue cul-de-sac is centrally located both to the waiting area inside the lobby of the cultural building and the ramps leading to the ferry dock.

FIGURE III-5
Existing
Operation

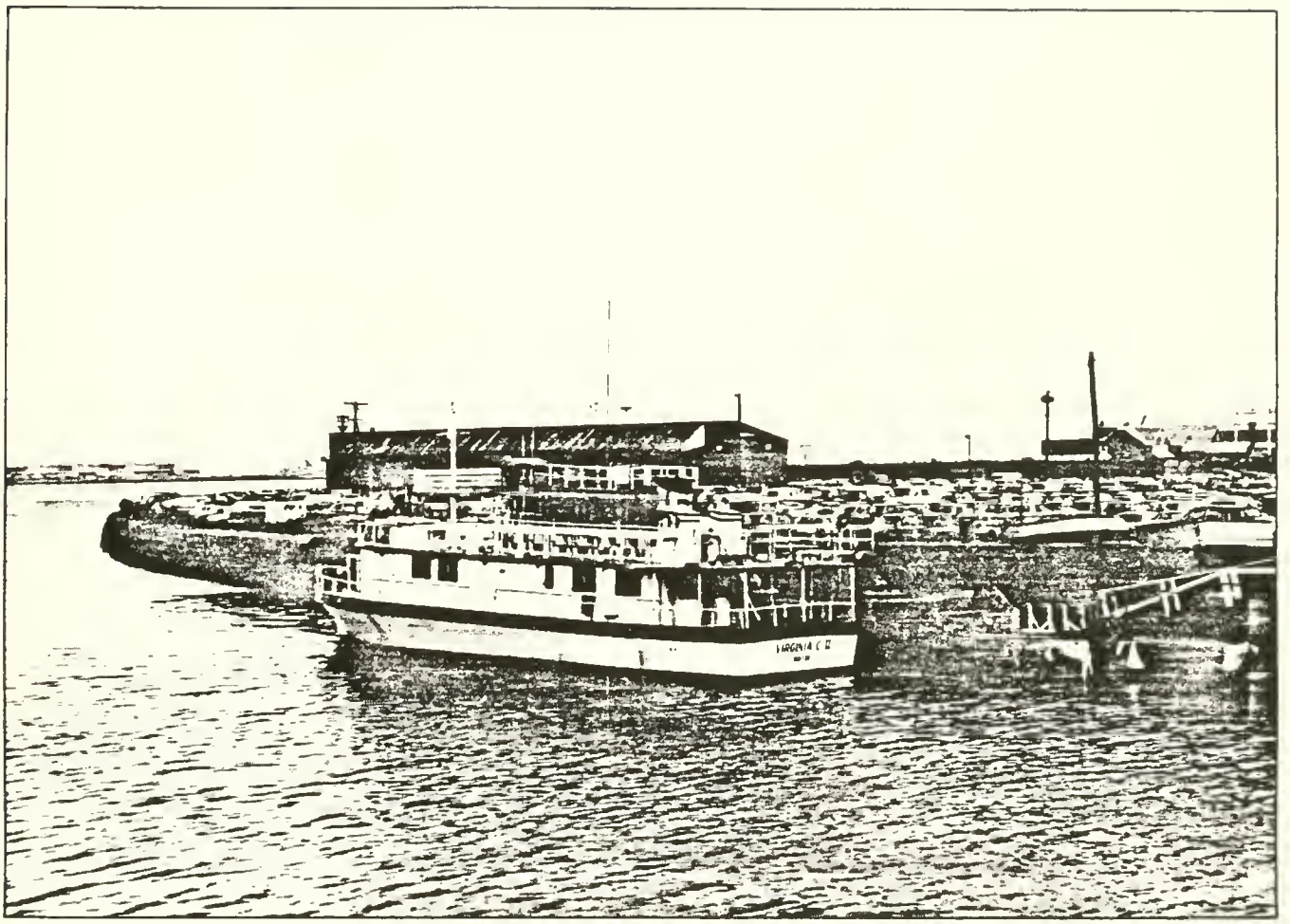
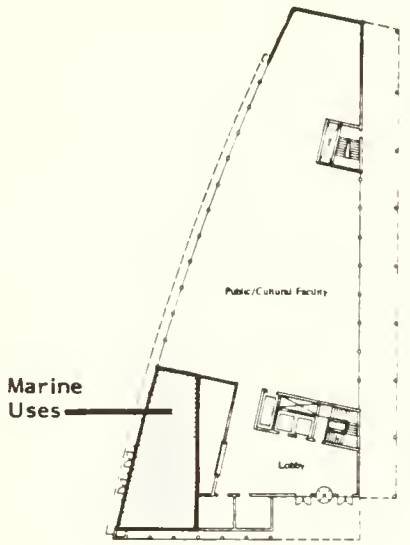
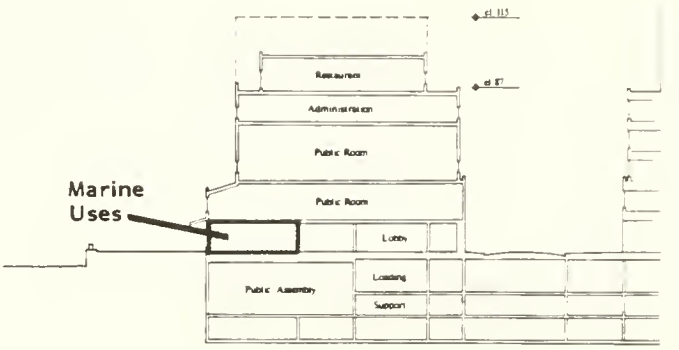


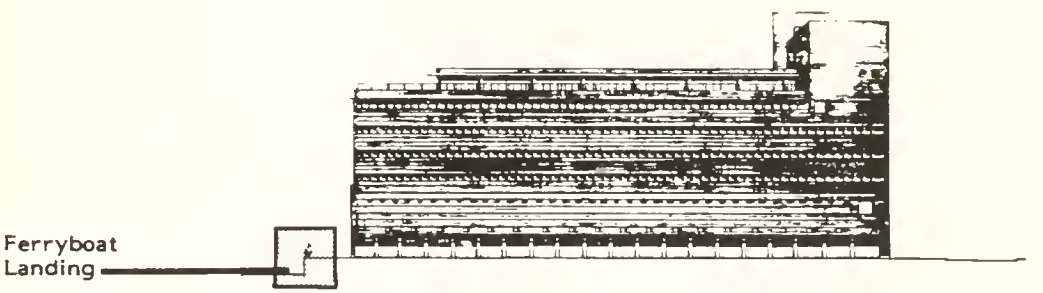
FIGURE III-6
Conceptual
Plan for
Cultural
Building with
Marine Uses



Ground Floor Plan



Section Looking North



Harbor Elevation

Longer-term parking would be available in the below-grade parking garages associated with the Fan Pier Development, and could be accessed from the entrance off Sleeper Street.

■ Capacity of Proposed Fan Pier Facilities

Service capacity of an Inner Harbor Ferry will be defined by certain operational factors, including the size of the physical facilities and boats, the travel times to downtown and Fort Point Channel commuter destinations, and the provision of management systems to make most efficient use of on-land facilities.

Recognizing the variety of options currently available for water transportation systems in Boston, the facilities designed for the Fan Pier are sufficiently flexible to permit a number of options in terms of ferryboat size, marine uses, and passenger capacities. However, a number of assumptions used in the feasibility analysis are contingent upon the design specifics, as set forth below.

As is the case with all the downtown docks, the linear footage of the Fan Pier landing establishes a fixed number of boats that are able to operate within the system at any one time. In addition, dock and pier configurations limit the number of boats that can safely wait nearby "in line" to land.

To assist in determining the adequacy of the proposed Fan Pier dock to handle a peak hour commuter boat rush, the following calculations were made to identify the number of boats—at the length reasonably expected for the Inner Harbor system--that could be docked at Fan Pier at one time.

For this preliminary analysis, it was assumed that the boats in an Inner Harbor Ferry system would be traditional ferries, similar to those currently in operation in Boston Harbor. The length of the average commuter boat in use in Boston Harbor in the 1986 season was 65'. As explained in the later section on vessel criteria, preference among operators is for the shorter vessels, with 65' as the outside limit for Inner Harbor transportation. Conceivably, lengths as low as 40' could accommodate the estimated passenger load for some system segments.

Table III-1 presents the dockage calculations completed for the range of possibilities presented above concerning boat size and dockage availability. For a realistic estimate, assumptions similar to those used at other Boston waterfront projects, including Rowes Wharf, were used.

TABLE III-1
Fan Pier
Dockage
Capacity

Fan Pier Dockage Assumptions

160 l.f.	Length of Commuter Dock
LOA x 1.25*	Berth Required per Boat
5 minutes	Turnaround Time

50' x 1.25 = 62.5' needed at the Fan Pier dock

65' x 1.25 = 81.25' needed at the Fan Pier dock.

160' / 62.5' = 2.56
2 boats at 50' possible at one time

160' / 81.25' = 1.96
2 boats at 65' possible at one time

* Rule of thumb for dockage requirements.

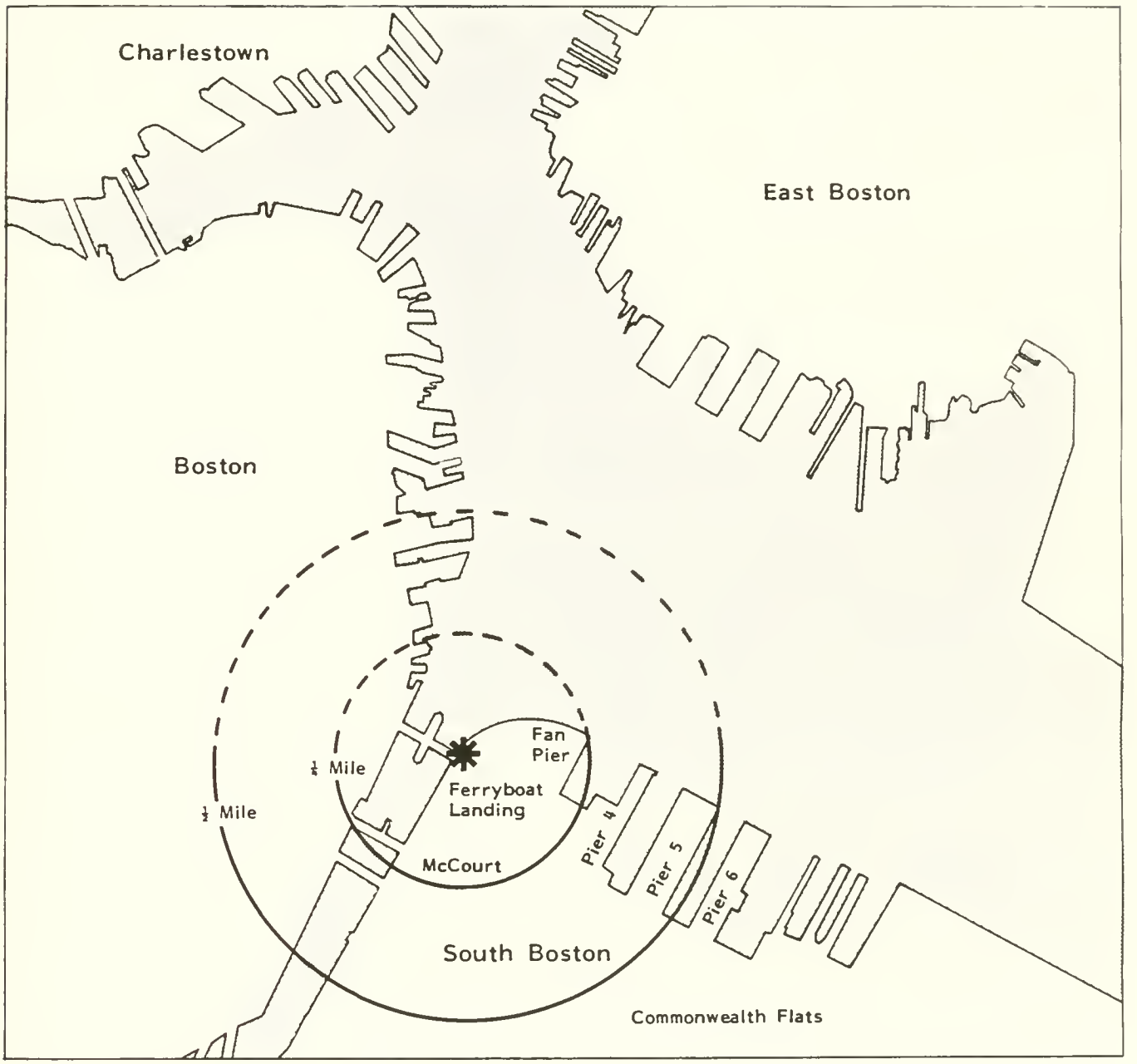
Using the range of assumptions presented in Table III-1, a minimum of two boats and a maximum of three boats will be accommodated at the Fan Pier dock at any one time.

Service capacity is also defined by the situation of the ferry dock on the Fan Pier site and the location of the Fan Pier in relation to the other possible Inner Harbor commuter ferry stops. The travel time necessary to reach the selected destinations downtown must be competitive with conventional transportation methods, and distance from the Fan Pier dock to other Fort Point Channel developments using the service must also be reasonable.

Figure III-7 indicates the distances from various future Fort Point Channel developments--including the Fan Pier and Pier 4 Devlopments--to the Fan Pier commercial boat dock. As illustrated, the Fan Pier offices and western half of the McCourt/Cabot Cabot & Forbes property are most conveniently located and within the quarter-mile boundary used in transit planning to determine most likely users. The second boundary, incorporating all developments within a half-mile walk of the ferry dock, reaches both the Pier 4 Development and the World Trade Center at Commonwealth Pier. Workers from these developments are, according to transit standards, the second most likely ferry users. Developments outside this second boundary--including the Fish Pier and Commonwealth Flats Developments--are not likely to walk to the ferry dock and use the proposed service.

Given these limitations of space requirements and distance, the specifics of this system were more

FIGURE III-7
Distances
to the Fan
Pier Ferry
Dock



reasonably identified. The following sections discuss the selection of the shuttle route, downtown landings, and ferryboat criteria.

OTHER LANDINGS

■ South Station

South Station is located in Boston's Dewey Square, approximately 600 feet from the Fort Point Channel. It services Red Line rapid transit and Commuter Rail from points south and west of Boston. Although in terms of transportation connections the site is quite attractive, a number of factors reduce its potential value for water transportation.

- Current bridge clearances under the Congress and Summer Street bridges (6 and 4 feet respectively at high tide) are simply too low for any commercial boat currently in use or under consideration by local operators.

- Walking time to South Station from the Fan Pier (or the ferry dock at Rowes Wharf) appears to be shorter than boat travel time after taking into consideration loading and unloading time.

- The landing site that has been discussed in recent months, the Boston Edison parking lot off Atlantic Avenue, is barely half the distance from the Fan Pier dock to the South Station entrance.

- The shuttle bus system proposed by the Fan Pier and Pier 4 Developments connects the Fort Point Channel area with South Station much more efficiently and quickly.

Although a South Station landing may well be feasible for a system connecting more distant locations (such as the commuter runs from the South Shore), it appears redundant for the Inner Harbor Ferry system. Water transportation facilities are already planned for the Fan Pier and Pier 4 Developments, as well as the Rowes Wharf Development downtown and current demand predictions for water transportation in the Inner Harbor do not support such a clustering of dock space.

■ Long Wharf

Of all the landings considered, Long Wharf has, by far, the greatest number of advantages. Even though commuter and excursion boats currently dock at Long Wharf, the Massachusetts Department of Environmental Management (DEM) and the Boston Redevelopment Authority (BRA) are in the process of redesigning the area to accommodate more efficiently the demand for Inner Harbor ferry dockage and facilities. In addition, any dock space at Long Wharf would be convenient to both the Blue Line Aquarium MBTA stop and the New England Aquarium, a major tourist attraction.

Figure III-8 shows the latest design plan for the Long Wharf project. Marked on it are the four locations at Long Wharf that seem particularly suited to the Inner Harbor Ferry project.

- The first possibility would be any spot along the walk-to-the-sea lane in the Public Boat Basin. Although maneuvering might become time-consuming the further inland the boat had to travel, landing as close to Christopher Columbus Park as possible greatly reduces the walking distance from the dock to the Aquarium MBTA station. In inclement weather, passengers could use the public walkway through the Marriott. Although a final determination could not be made until boat selection was complete, some dredging might be required along the bulkhead.

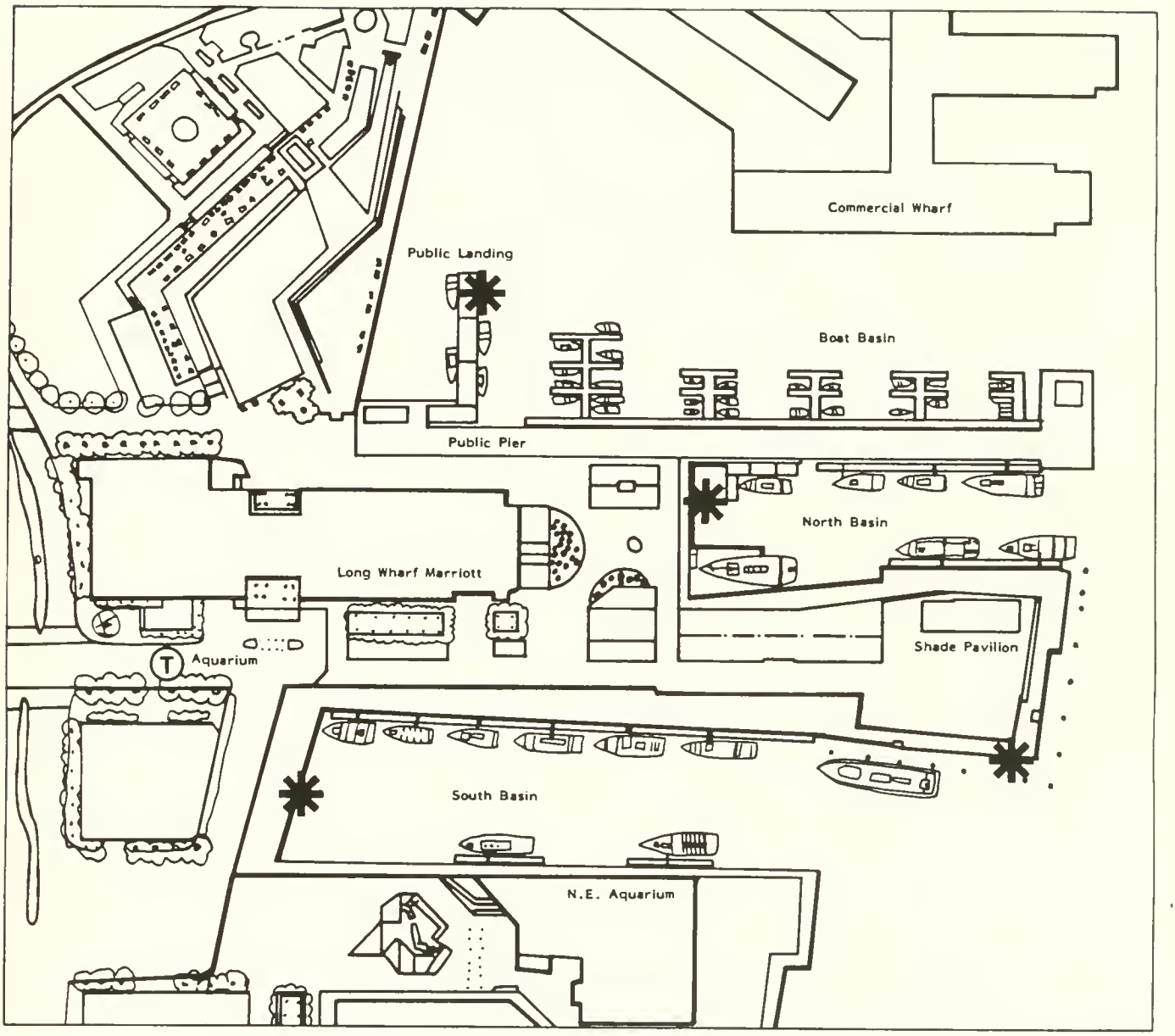
- Similarly, docking in the South Basin would provide easy access to the Aquarium MBTA station (and, in this case, to the Aquarium itself), but depending on the volume of traffic in and out of the basin, maneuverability could be severely limited. This is, however, the most convenient spot for access to the downtown.

- The BRA has identified the New North Basin (created by the extended walk-to-the-sea lane) as the primary commercial landing in its current plans. However, dockage would have to be carefully managed to avoid overcrowding and landing conflicts during peak hours.

- Finally, there is the possibility of docking at the tip of the wharf, between the North and South Basins. The MBTA Shade Shelter would provide some covered waiting area, but additional covered walkways would be helpful along the perimeter to the Aquarium MBTA station. This stop would obviously afford the fastest turnaround time and speed up the entire round trip time.

A flexible approach might serve to alleviate many of the problems cited above. Inner Harbor Ferry boats (as well as other water transportation systems) would use the outermost and/or New North Basin sites during the warm weather when the walk along the pier would be most enjoyable, and utilize the inner sites during the winter and inclement weather when proximity to the MBTA station is most crucial. Also, there is apt to be little excursion boat activity causing congestion in the basins in the winter months, allowing for a more rapid journey along the wharf. Final determination of a Long Wharf landing is incumbent upon finalization of design plans by the BRA and DEM for the Long Wharf project, scheduled for the fall of 1987.

FIGURE III-8
Long Wharf
Redesign



■ North Station

Although no formal plans have been developed for a ferryboat landing at North Station, preliminary research and discussions with a number of public agencies--including the Metropolitan District Commission (MDC), BRA, and Boston Transportation Department--and marine engineers suggest that the site would be technically feasible as a public ferryboat landing. The Massachusetts Water Resources Authority (MWRA) is also evaluating the use of a site in this general area as a landing for boats transporting construction workers to Deer and Nut Islands.

Owned by the MDC, the site examined for this study is adjacent to the MDC Marine Police Facility and New Charles River Dam, less than a two minute walk to the commuter train platforms and three and a half minute walk to the North Station T stop, serving the Orange and Green lines. From both the T station and the Commuter Rail, the walks would be covered for a portion of the distance. As indicated on Figure III-9, travelers from the T station would walk under the T overpass across Causeway Street, under the North Station arcade along Causeway Street, and under the I-93/Charles River Bridge. From the train platforms, the walk would cross the parking lot and pass under the I-93/Charles River Bridge. In addition, the Charles River Dam provides a convenient and much used connection to City Square in Charlestown, so that Charlestown residents may also be encouraged to use the Inner Harbor Ferry during commuting hours.

The Charlestown Bridge has a 22' clearance at mean high water, ample for most suitably sized boats. However, planning for the Central Artery and its construction should consider the location(s) for a North Station landing. Although subject to change, current designs suggest that this will not be a problem.

■ Clippership Wharf

Recently proposed plans for Clippership Wharf, a primarily residential development in East Boston, include complete reconstruction of the piers and provision for a number of water dependent uses. The developer has expressed an interest in options for water transportation--including either an entirely new system or a link coordinated with the existing services. Although the site is located near the Maverick MBTA stop on the Blue Line, the project is expected to generate enough demand to support a water transportation link to the downtown. As a result, Clippership Wharf would appear to be a logical choice for an Inner Harbor Ferry stop. See Figure III-10.

■ Charlestown Navy Yard

Redevelopment of the Charlestown Navy Yard is particularly well suited for the accommodation of water transportation services. Residents and workers would benefit from an Inner Harbor Ferry stop on a regular

FIGURE III-9
North Station
Landing

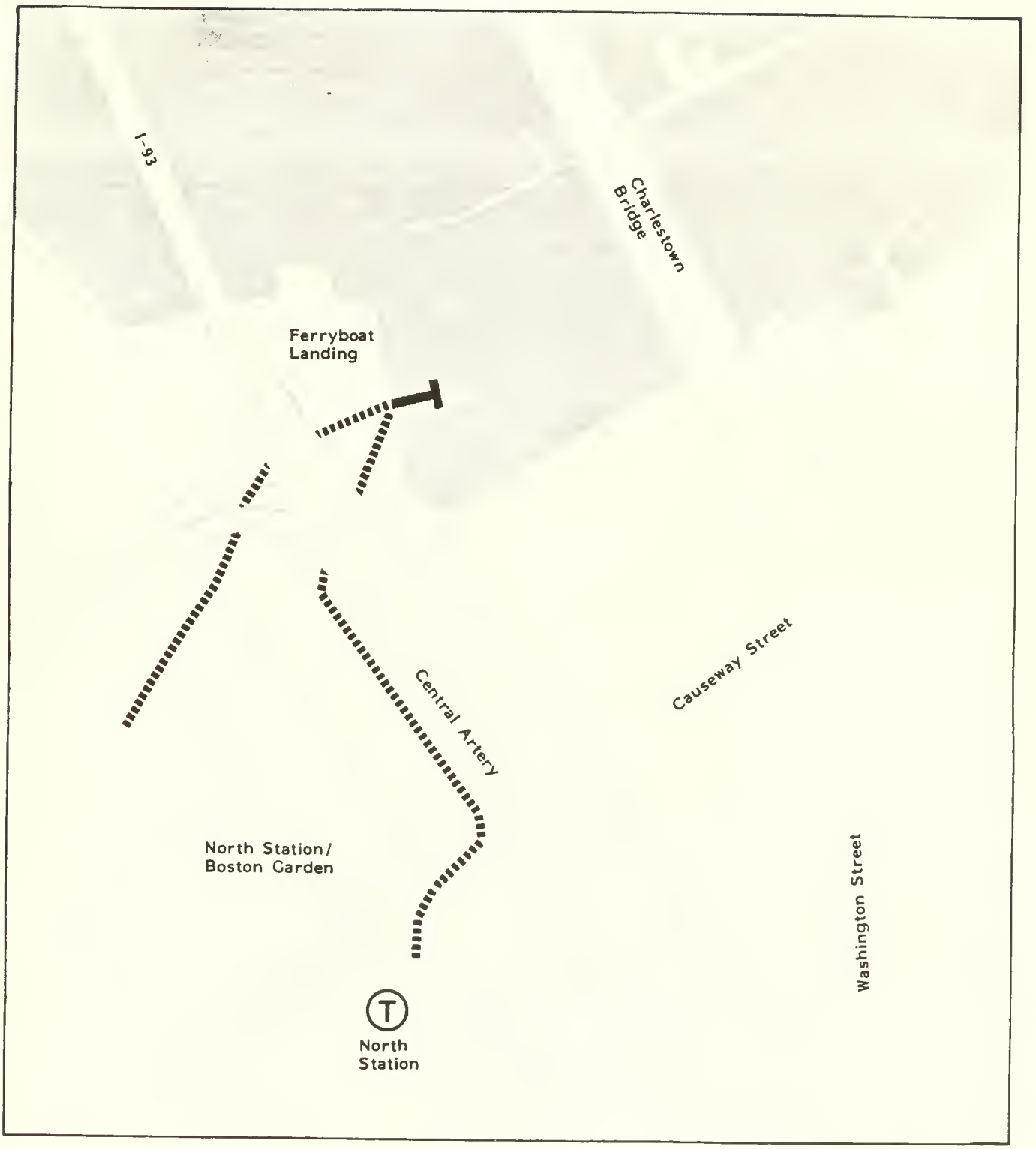
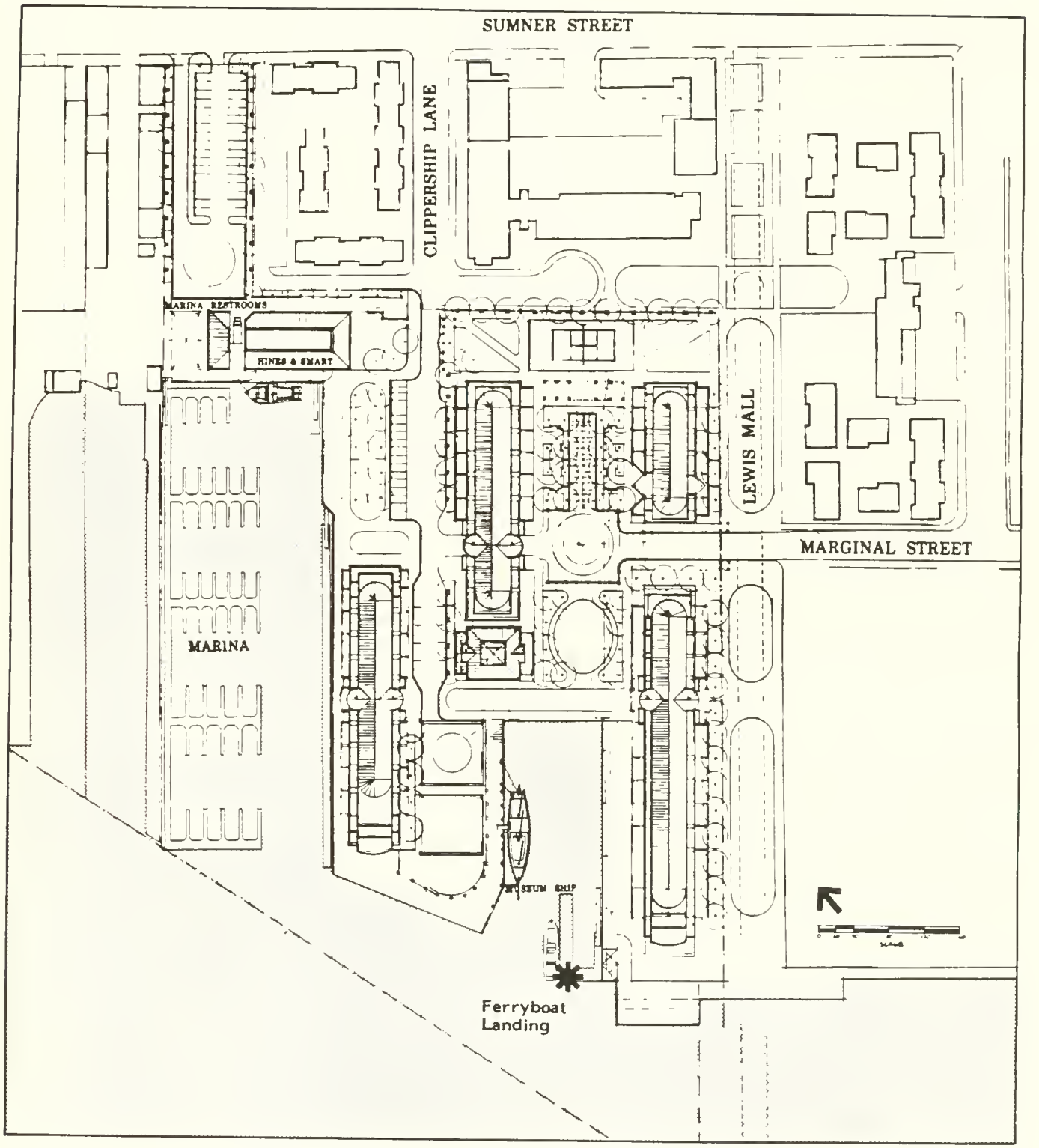


FIGURE III-10
Clippership
Wharf Plan



basis, while visitors to the U.S.S. Constitution and other tourist attractions in the Navy Yard would be likely to use the system during the off-peak hours. As the plan on Figure III-11 reveals, a number of tourist attractions and parks are located within walking distance of the proposed ferry landing on Pier 1, the berth of the U.S.S. Constitution. Alternately, the BRA is proposing a ferry stop on Pier 4, a location more centrally situated to the residential developments planned and under construction at the Navy Yard.

ROUTES

Of the six landings mentioned above, only South Station fails to meet the needs of the proposed Inner Harbor Ferry. Thus, a route, or multiple routes, must be laid out that connect these various sites in the most efficient way possible. In order to do this, the needs of the commuters at each of these sites must be clarified.

Commuters living at the Fan Pier, Clippership Wharf, and Charlestown Navy Yard Developments could benefit from transportation to Long Wharf -- central to the majority of downtown office buildings and a connection on the MBTA Blue Line. Meanwhile, commuters travelling on the Blue, Orange, and Green Lines and the Commuter Rail lines to North Station could use the ferry as a link to the offices at Fan Pier, Pier 4, and other Fort Point Channel locations. Therefore, there are five basic transit links that can be created to move commuters efficiently on the Inner Harbor Ferry: North Station to Fan Pier; Long Wharf to Fan Pier; and Fan Pier, Clippership Wharf, and Charlestown Navy Yard to Long Wharf.

Three complementary routes have been designed to serve these separate links. Route A will be an express link between Fan Pier and North Station. Route B will run from the Charlestown Navy Yard to Clippership Wharf, downtown to Long Wharf, and return to the Charlestown Navy Yard. Route C will shuttle between Long Wharf and Fan Pier. Note: the previous description is for the AM service only, the direction will reverse in the PM hours of operation. Figures III-12, III-13, and III-14 chart the three Inner Harbor Ferry routes.

TRAVEL TIMES

Travel times along the Inner Harbor Ferry routes were calculated for the proposed 10 MPH speed limit, set by the Boston Harbormaster. (The speed has been calculated in MPH to facilitate comparison with landside transportation speeds.) Tables III-2, III-3, and III-4 chart the distance along each leg and

FIGURE III-11
Charlestown
Navy Yard
Landing

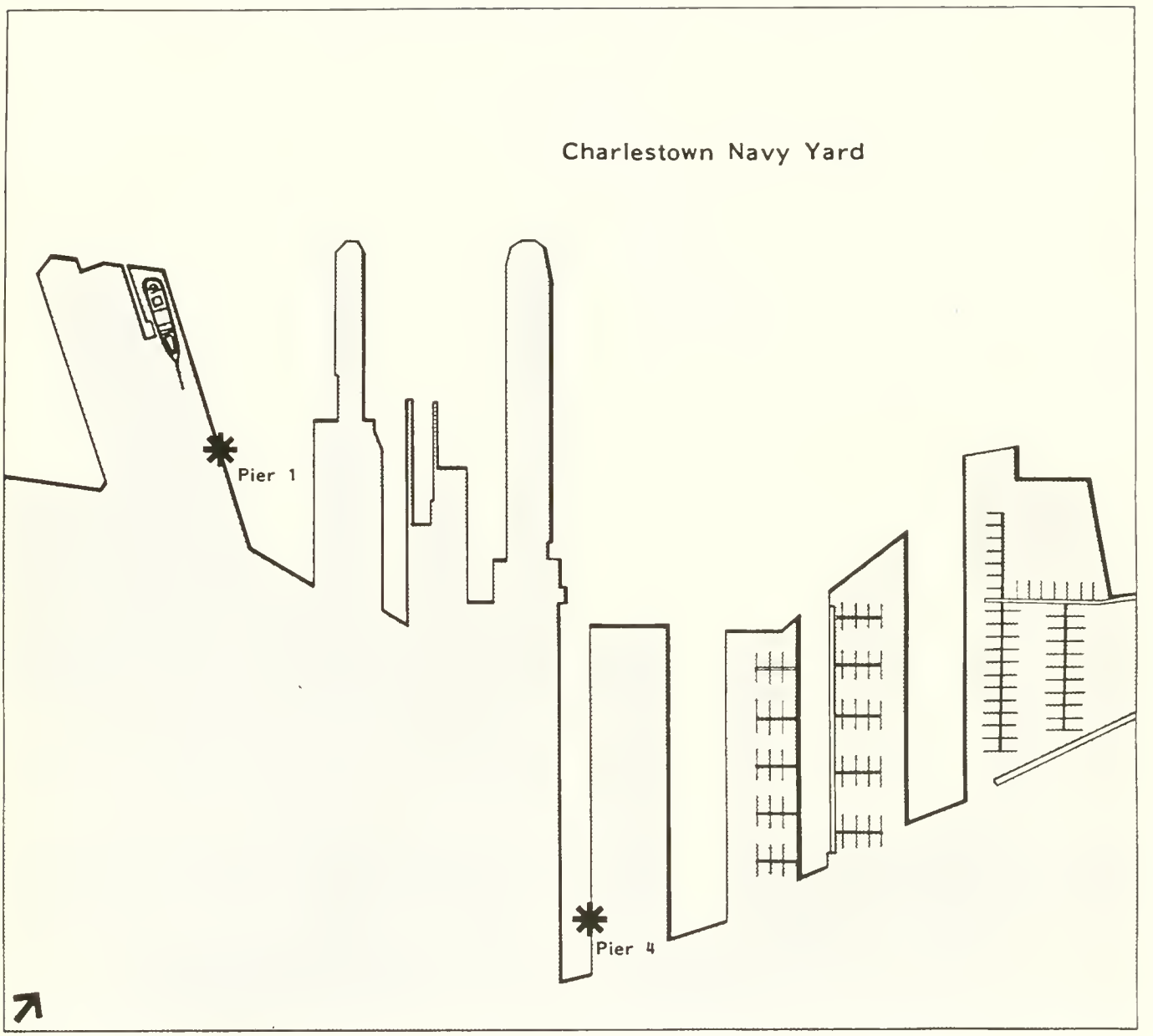


FIGURE III-12
Inner Harbor
Ferry Route A

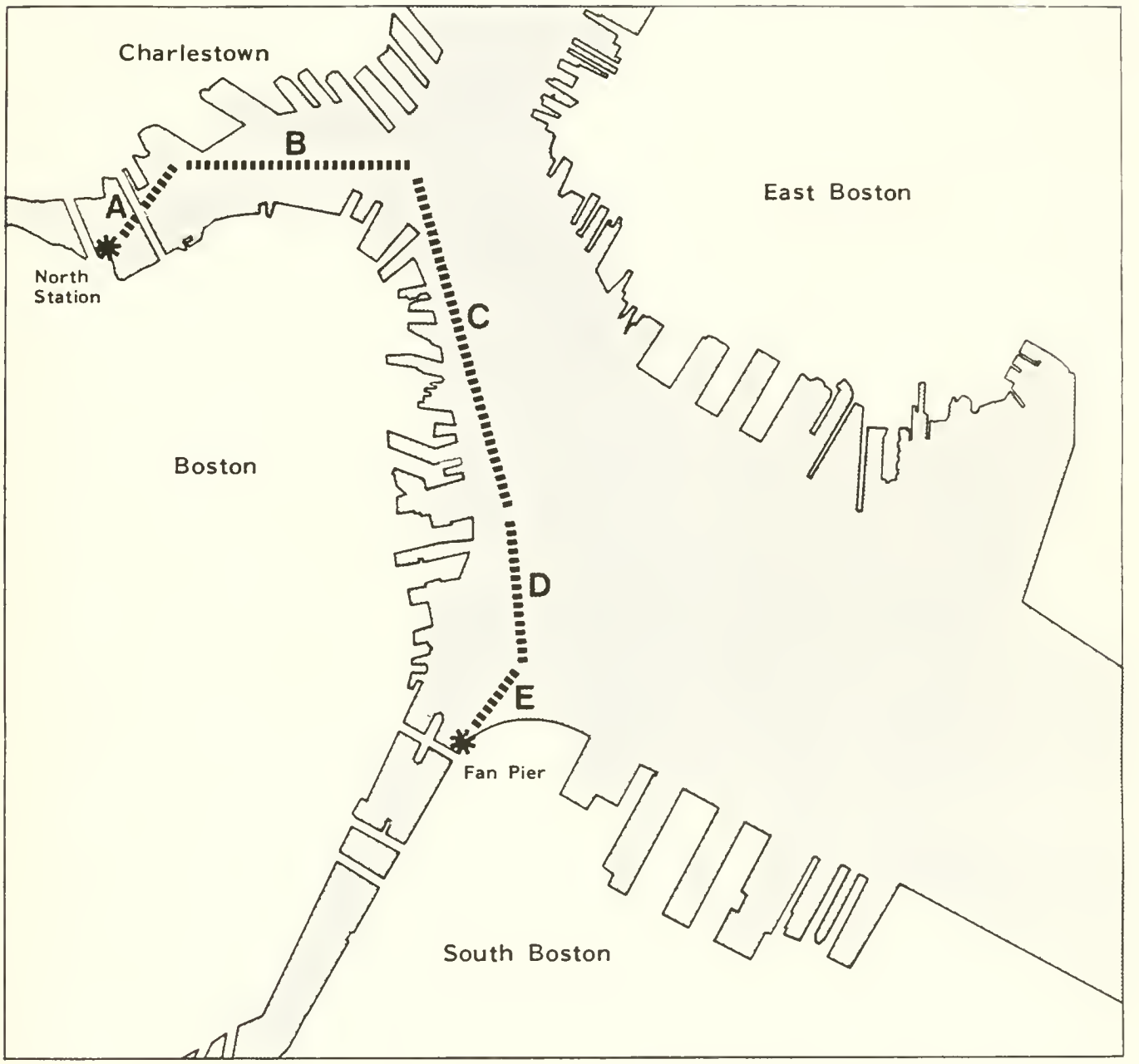


FIGURE III-13
Inner Harbor
Ferry Route B

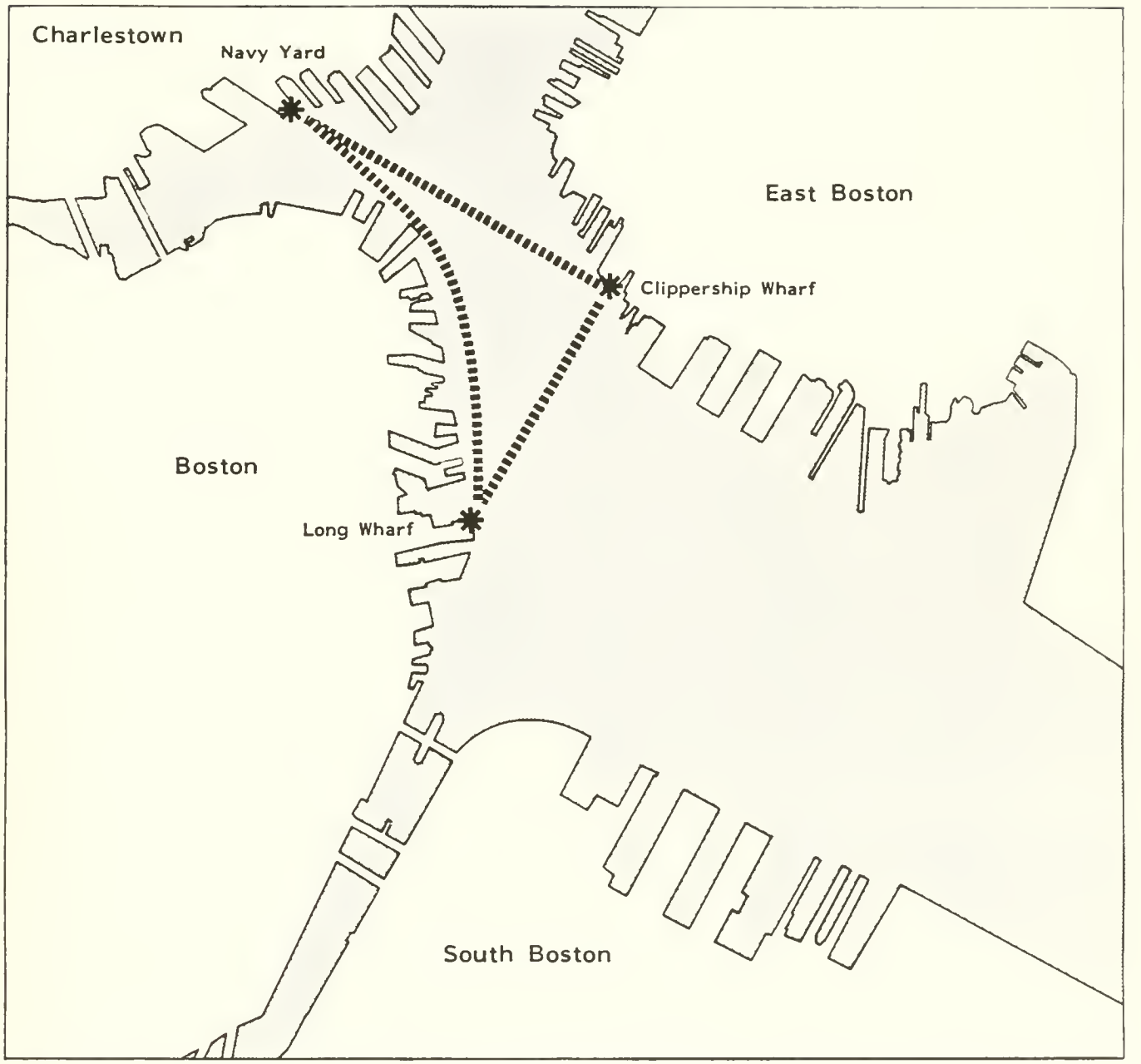


FIGURE III-14
Inner Harbor
Ferry Route C

calculate the travel times for each segment of the trips. The average speed is a realistic estimation of the actual travel time, factoring in the need to slow down in congested areas or when rounding channel buoys.

TABLE III-2
Route A
Travel
Times

Leg	Distance	Average Speed at 10 MPH*	Time Mins.
A	.07	4	1.7
B	.21	8	2.6
C	.43	10	4.1
D	.13	10	1.3
E	.17	7	2.4
TOTAL	1.01 miles		12.1

TABLE III-3
Route B
Travel
Times

Leg	Distance	Average Speed at 10 MPH	Time Mins.
A	.57	7	5.1
B	.46	6	5.5
E	.83	5	9.5
TOTAL	1.86 miles		20.1

TABLE III-4
Route C
Travel
Times

Leg	Distance	Average Speed at 10 MPH	Time Mins.
A	.39	4	6.5
TOTAL			6.5

*Note: The speed has been calculated in MPH to facilitate comparison with landside transportation speeds.

In addition, boat schedules would have to allow time for loading and unloading (approximately 5 minutes depending on boat capacity and design).

VESSEL SELECTION

■ Criteria

The variety of commuter, shuttle, and excursion vessels currently operating in Boston Harbor allow easy examination of the base characteristics needed for an efficient and feasible system. While the most difficult variable appears to be that of size (current operators being somewhat limited by outdated and non-need specific designs), the following is a list of

the minimum characteristics that should be considered in the boat selection for the Inner Harbor Ferry:

- Size: As stated in reference to the adequacy of the proposed Fan Pier dock, a range in length from 50 to 65 feet seems to be the most convenient. In order to clear the Charlestown Bridge, a clearance height of no greater than 22' is required. Most boats either in operation or being built for similar purposes fit these criteria easily.

- Passenger capacity: While capacity should finally be dependent upon the expected ridership, boats with 44, 75, and 100 passenger capacities have been built successfully within the above size guidelines.

- Speed: The most recent draft of the revised Boston Harbor regulations sets an Inner Harbor speed limit of 10 knots and requires that "no vessel shall create a wake or operate at a speed which endangers life, safety or property of any person in Boston Harbor."

- Loading: Design should permit rapid on and off-loading and handicapped accessibility.

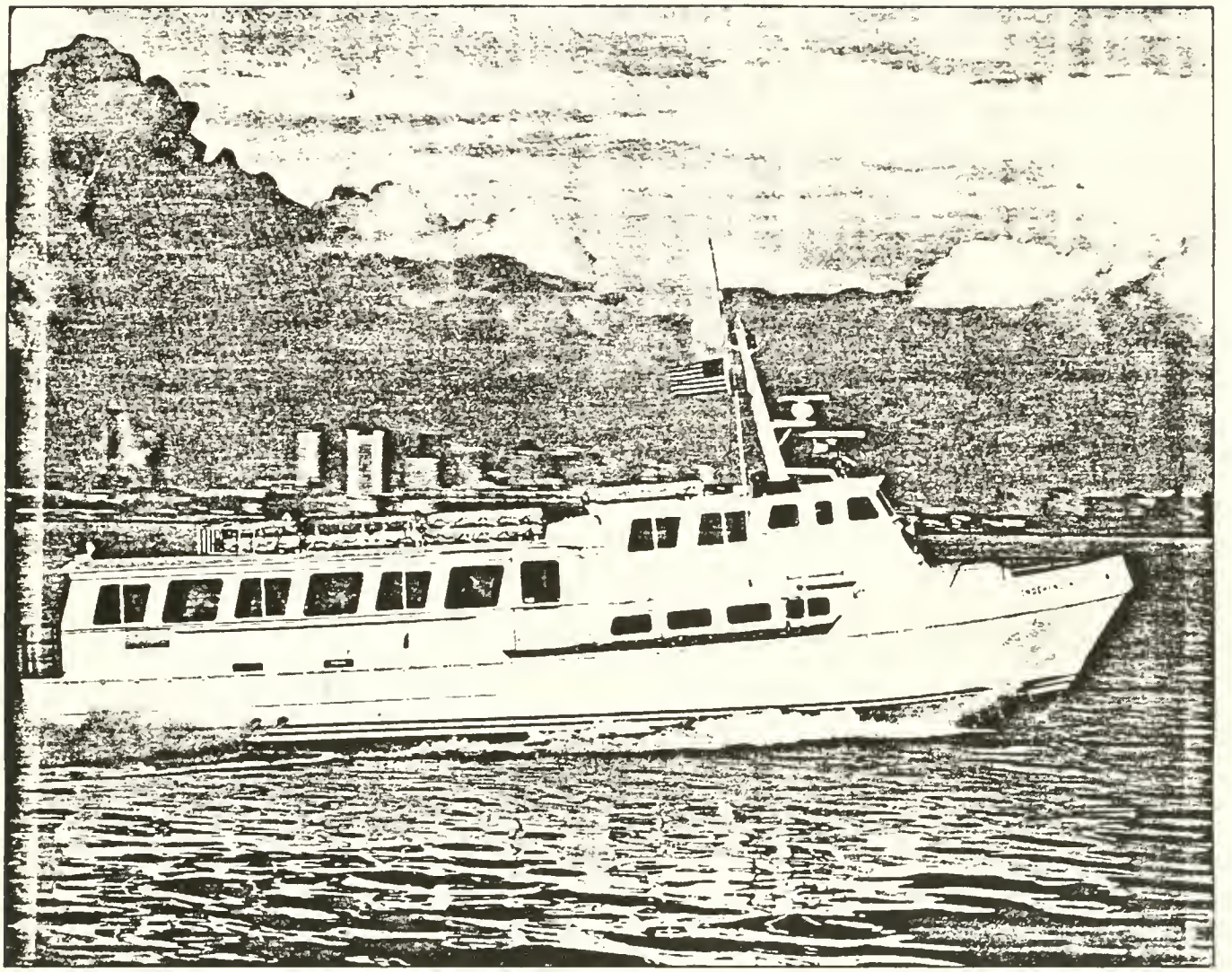
- Flexibility: Since no standards have yet been established for docking facilities or onboard facilities, candidate vessels should be adaptable to the wide range of dock sizes and layouts currently in use. Similarly, the vessel should be suited to a number of uses. Quite conceivably, off-peak uses could benefit from passenger amenities not needed during peak hour usage.

- Durability: As evidenced in the early days of the Hingham commuter service, hydrofoils are easily damaged by the debris floating and submerged in the Inner Harbor. Boats should also be designed with the often inclement weather in mind. Local operators boast that only hurricane-force weather has to date caused cancellation of service.

- Aesthetics and amenities: Since open decks are considered unneccessary uses of space on boats used for short runs, large windows should be a consideration. For the same reason (short travel distances) few passenger amenities are needed beyond what is provided on MBTA buses and cars. However, some exposed deck area would probably enhance excursion use.

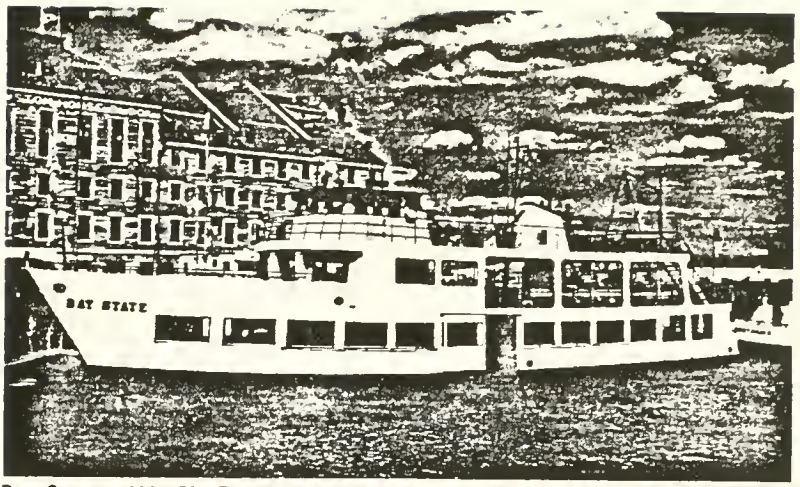
The diagrams and photographs on the following pages (Figure III-15) are representative of the boats designed and/or currently in operation for commuter purposes in and to Boston Harbor.

FIGURE III-15
Vessel Types

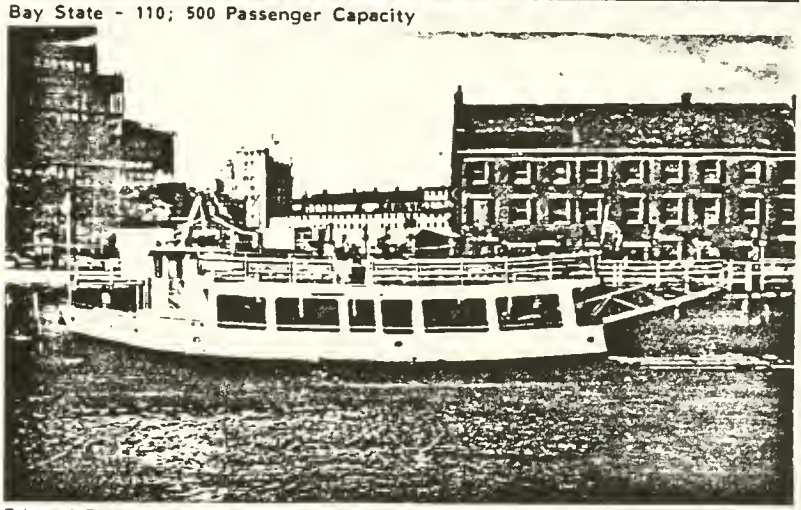


Independence - 77'; 136 Passenger Capacity

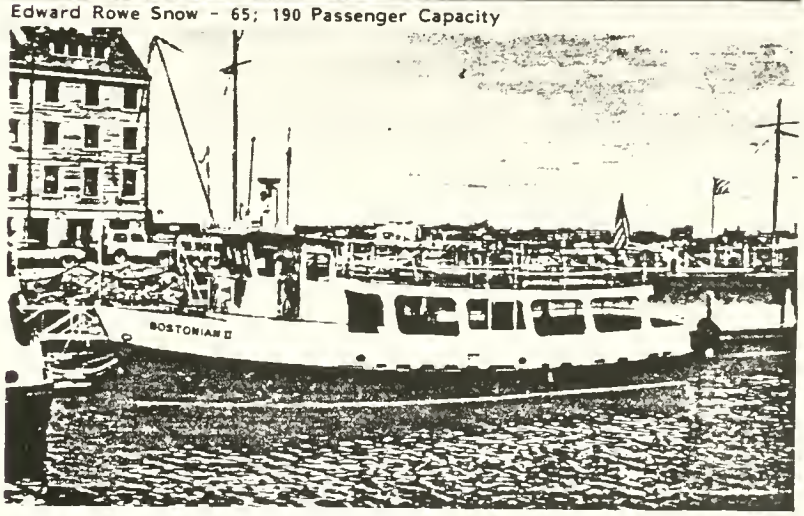
FIGURE III-15
Vessel Types
(cont.)



Bay State - 110; 500 Passenger Capacity

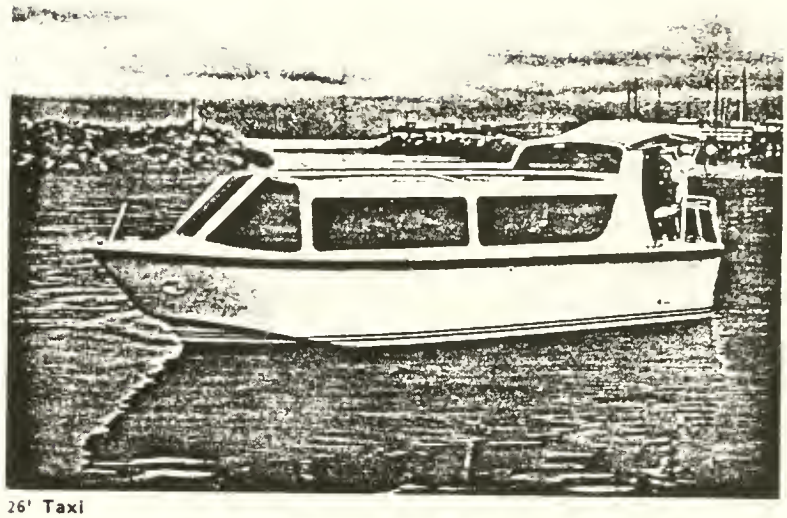


Edward Rowe Snow - 65; 190 Passenger Capacity

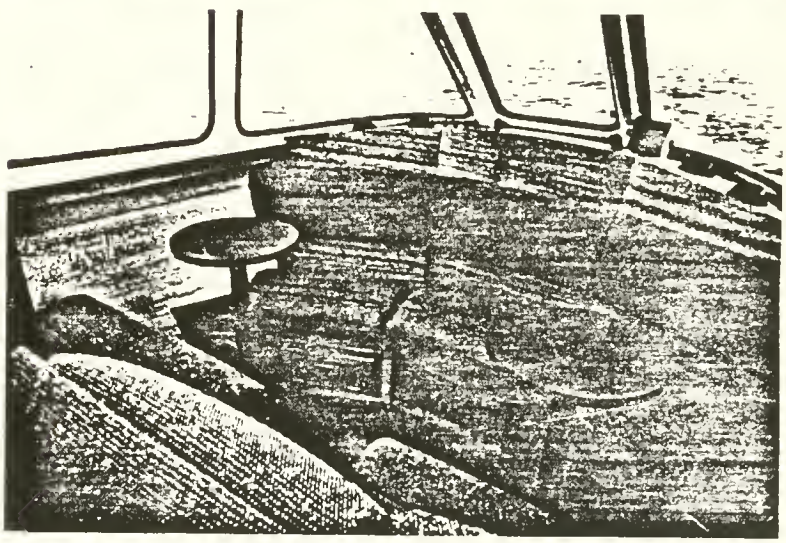


Bostonian II - 62; 149 Passenger Capacity

FIGURE III-15
Vessel Types
(cont.)

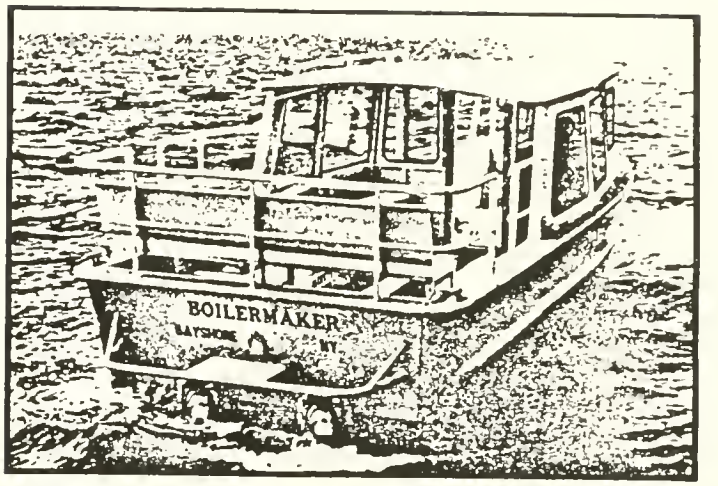


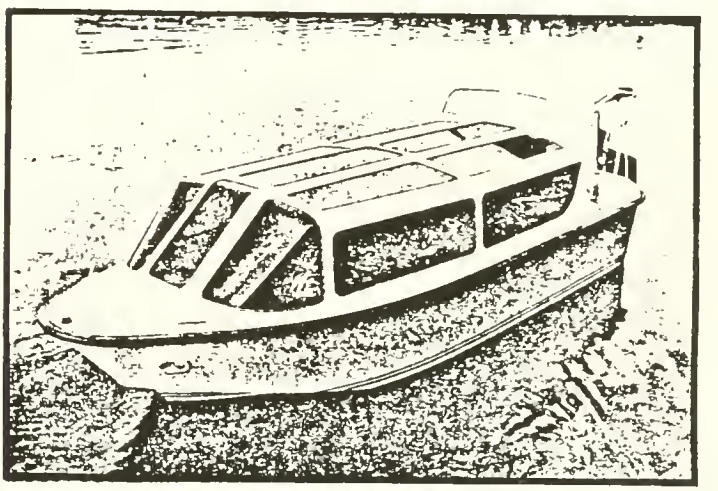
26' Taxi

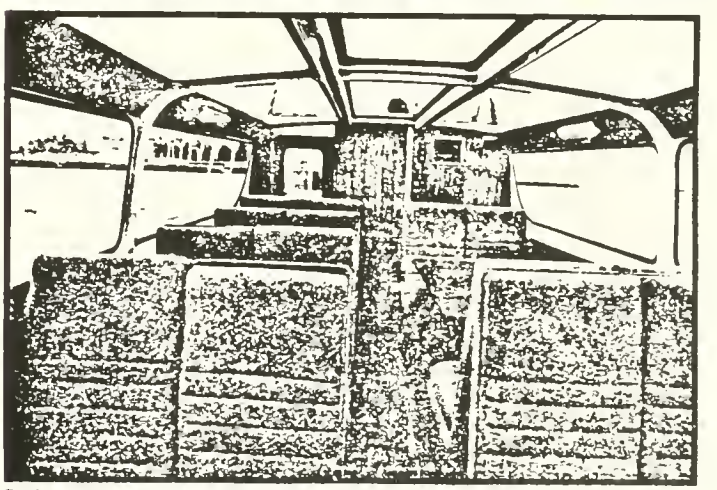


Inner Harbor Ferry

FIGURE III-15
Vessel Types
(cont.)

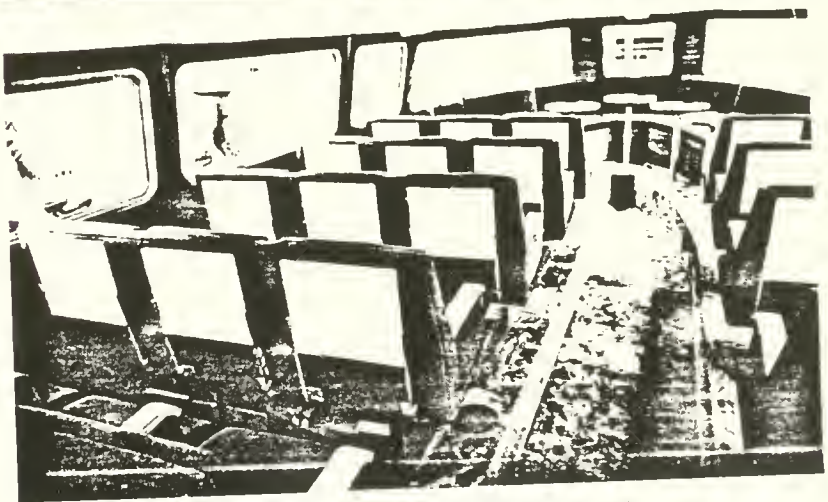






Boilermaker - 26' Hammerhead, 25 Passenger Capacity,
High Speed Water Taxi

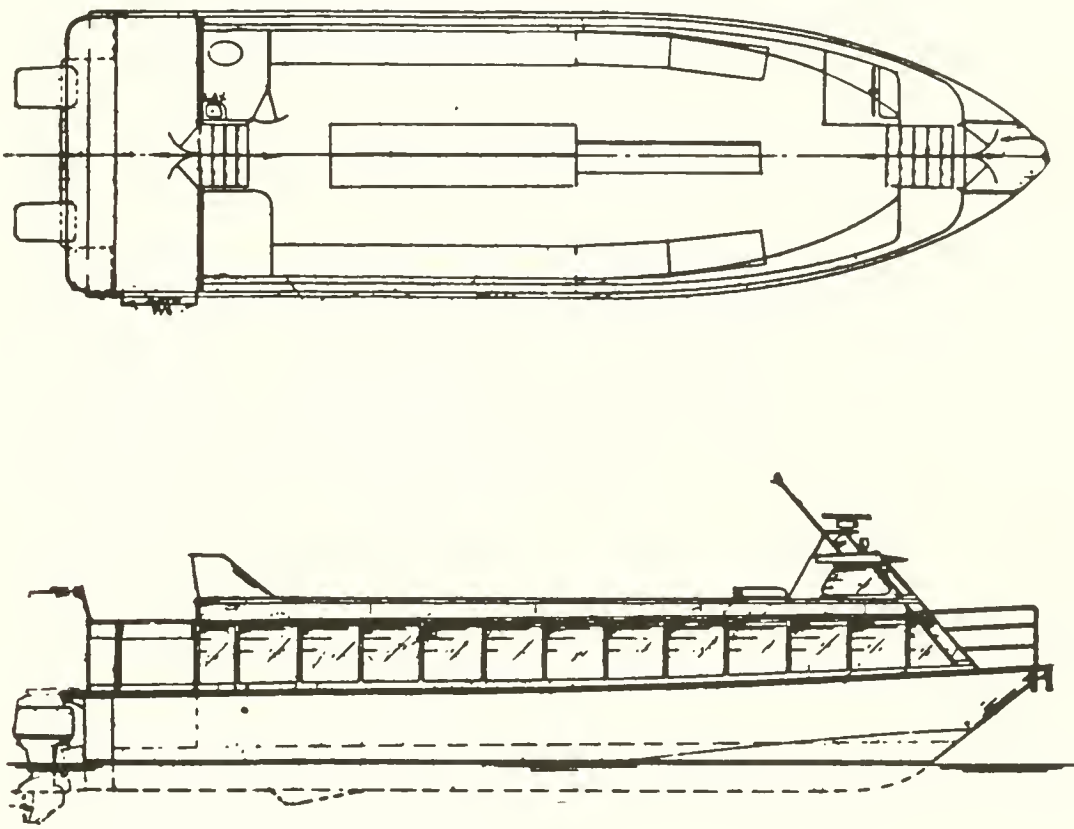
FIGURE III-15
Vessel Types
(cont.)



Lucky Strike - 40'; 49 Passenger Capacity - High Speed Taxi

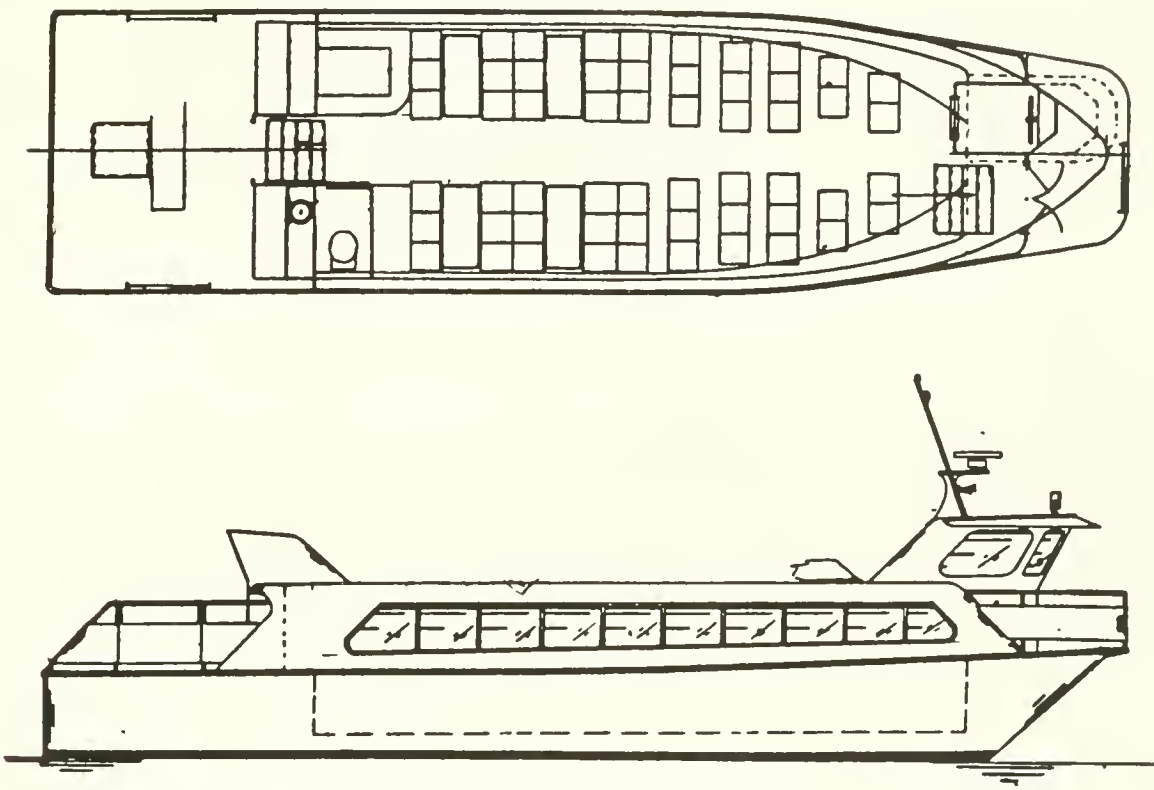
Inner Harbor Ferry

FIGURE III-15
Vessel Types
(cont.)



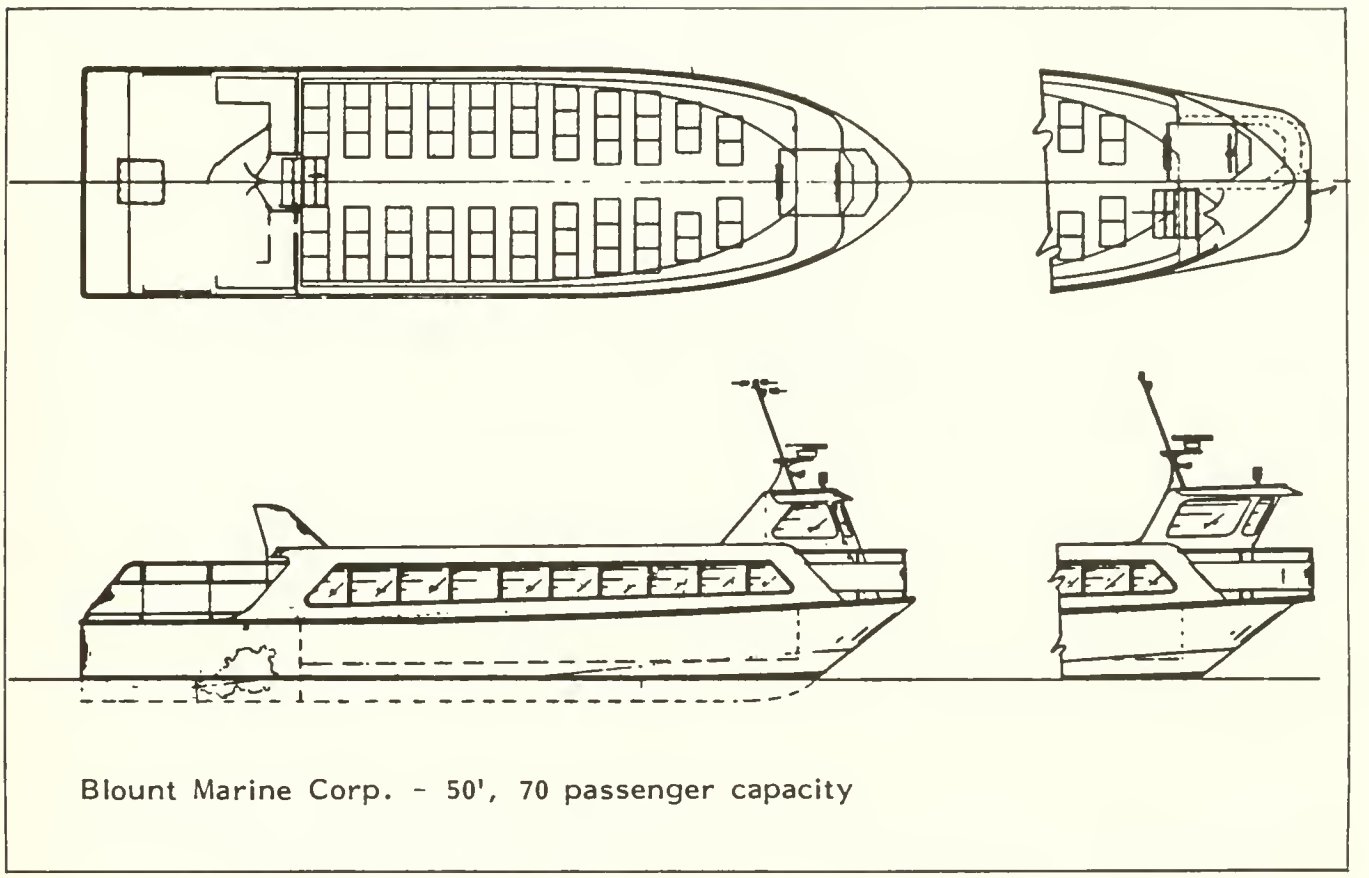
Blount Marine Corp. - 48', 48 passenger capacity

FIGURE III-15
Vessel Types
(cont.)



Blount Marine Corp. - 53' 66 passenger capacity

FIGURE III-15
Vessel Types
(cont.)



Blount Marine Corp. - 50', 70 passenger capacity

IV. FEASIBILITY

METHODOLOGY

An overall systems and cost feasibility analysis for the Inner Harbor Ferry was conducted using typical transit analysis procedures, similar to those used to determine the proposed shuttle bus services to the Fort Point Channel development area (discussed in Chapter IV.1, Traffic and Parking, of the Fan Pier and Pier 4 Final EIR). Since no ferry system comparable to the one proposed here was identified in background research, all assumptions have been geared towards the most conservative estimates possible. Two interlocking and complementary systems are studied below: a peak hour system geared for commuter use as a traffic mitigation measure and an off-peak system incorporating additional landings adjacent to cultural institutions.

OPERATIONAL FEASIBILITY

The Inner Harbor Ferry routes presented in the previous section of this report (Figures III-12, 13, and 14) will operate throughout the day. Directional switchover will occur at some point after midday, and frequency of service may be diminished during the off-peak hours. Initially, peak hour operation is planned for implementation between the hours of 6:00 AM and 9:30 AM and 3:15 PM and 7:30 PM to intersect with peak hour operation of other public transit modes. However, this feasibility section will analyze only the AM peak period service.

■ Cycle Times

Round-trip cycle times determine the ideal number of boats needed for operation at capacity of a fixed-route service. In addition to the stop-to-stop travel time, two other components must be figured into the cycle

time: unloading/loading time and slack time. As shownin Tables IV-1, IV-2, and IV-3, a single unloading/loading time of five minutes is added for each ferry stop. As an added assurance of accurate scheduling, slack time is also added to the base travel time to compensate for any unexpected delays. Depending on the size and capacity of the vessel being run, a number of minutes is added to the subtotal travel and loading time, as shown in the second set of calculations in the tables. Note: Because this analysis is based on realistic assumptions, cycle times are only computed for the proposed 10 MPH speed limit.

TABLE IV-1
Cycle Times
Route A

Leg	Travel Time	Loading Time	Subtotal
Fan Pier-No. Sta.	12.1	5	17.1 mins.
No. Sta.-Fan Pier	12.1	5	17.1 mins.
SUBTOTAL	24.2	10	34.2 mins.

Vessel Capacity	Subtotal	Slack Time	Cycle Time
44 Passengers	34.2	4.3	38.5 mins.
75 Passengers	34.2	5.8	40.0 mins.
100 Passengers	34.2	8.3	42.5 mins.

TABLE IV-2
Cycle Times
Route B

Leg	Travel Time	Loading Time	Subtotal
Navy Yard-Clippership	5.1	5	10.1 mins.
Clippership-Long Wharf	5.5	5	10.5 mins.
Long Wharf-Navy Yard	9.5	5	14.5 mins.
SUBTOTAL	20.1	15	35.1 mins.

Vessel Capacity	Subtotal	Slack Time	Cycle Time
44 Passengers	35.1	2.4	37.5 mins.
75 Passengers	35.1	3.9	39.0 mins.
100 Passengers	35.1	6.4	42.5 mins.

TABLE IV-3
Cycle Times
Route C

Leg	Travel Time	Loading Time	Subtotal
Long Wharf-Fan Pier	6.5	5	11.5 mins.
Fan Pier-Long Wharf	6.5	5	11.5 mins.
SUBTOTAL	13.0	10	23.0 mins.

Vessel Capacity	Subtotal	Slack Time	Cycle Time
44 Passengers	23.0	1.5	24.5 mins.
75 Passengers	23.0	3.0	26.0 mins.
100 Passengers	23.0	5.5	28.5 mins.

■Ridership Levels

Ridership levels were estimated for each of the legs composing the routes. In each case, these figures take into account the alternative transportation modes to the downtown locations, numbers of workers and/or residents at the chosen sites, and ferry travel times. Rather than develop one set of assumptions about water transportation usage that could be used universally for the feasibility analysis, an attempt was made to tailor the estimates to the individual needs of commuters at the selected ferry stops. The following sections present both the numbers generated and the assumptions used for each of the Inner Harbor Ferry links.

Because it is assumed that few people are likely to walk any appreciable distance to board the ferry and no one will use the system unless it is the most direct link to their place of work--these estimates are extremely conservative. No more accurate or confirmable assessment of the ridership is possible for several reasons. First, no completely comparable system exists from which data or assumptions can be borrowed. Secondly, because this is a relatively untried approach to water transportation (and commuter transportation in general), it is difficult to predict the level of interest in water transportation and the willingness of commuters to choose this system.

North Station to Fan Pier

This link will serve riders on the Orange Line north, Green Line north, and North Station Commuter Rail lines travelling to the Fort Point Channel locations.

Alternatives to the Inner Harbor Ferry require transferring to alternate transportation modes, as outlined below:

- Orange Line passengers from North Station would stay on the Orange Line to Haymarket, and transfer to a shuttle bus across the Channel to their destination.

- Green Line passengers would stay on the Green Line to Government Center where they would catch a shuttle bus to their destination.

- Commuter Rail users to North Station would transfer to the Green or Orange Lines and follow the corresponding route.

Note: Each of the previous scenarios assumes the operation of a shuttle bus system--as described in Chapter IV.1 of the Final EIR--connecting South Station and Government Center to the Fort Point Channel development area. Without this system, the alternatives would be more circuitous, requiring commuters to walk either from Aquarium or South Station, after switching to the Red or Blue Lines from one of the feeder lines.

Ridership levels for these transit lines were generated for the Final Environmental Impact Report Traffic and Parking analysis. As documented in that chapter of the Final EIR, those three lines--Commuter Rail north service, Green Line North, and Orange Line North--represent 21% of the total transit trips to the Fort Point Channel area.

As explained earlier, the location of the ferryboat dock on the western perimeter of the Fan Pier will influence ridership. For this reason, the proposed Fan Pier and McCourt/CC&F Developments (the two developments closest to the Fan Pier commercial boat dock) are calculated together as Zone 1; Pier 4 and Commonwealth Pier constitute Zone 2 and are less likely to contribute riders to the system; and Zone 3--the Fish Pier and Commonwealth Pier--is the furthest from the dock and therefore unlikely to add significantly to the system ridership. To obtain combined ridership estimates, three scenarios were developed by factoring in the differential contributions of developments to the system. The basis for calculating these scenarios factors in the distance of the target developments from the ferry dock and predictions of optimal ridership during the peak hour based on estimated ridership percentages for the Hingham commuter ferry. Estimates were then made of the possible percentages of ferryboat riders on the target line from each of the Fort Point

Channel development area zones. The breakdown of the ridership contributions from each of the defined zones for the three scenarios is as follows:

Scenario One

- 75 percent of the transit riders working in Zone 1 travelling on the selected transit lines.
- 40 percent of the transit riders working in Zone 2 travelling on the selected transit lines.
- 5 percent of the transit riders working in Zone 3 travelling on the selected transit lines.

Scenario Two

- 35 percent from Zone 1.
- 20 percent from Zone 2.
- 0 percent from Zone 3.

Scenario Three

- 10 percent from Zone 1.
- 5 percent from Zone 2.
- 0 percent from Zone 3.

Tables IV-4, IV-5, and IV-6, calculate the ridership expected at varying percentages of the total ridership to the Fort Point Channel area on the designated transit lines. Using these percentage calculations, Table IV-7 calculates the potential ridership generated by each of the three summary scenarios.

TABLE IV-4
Zone 1
Peak Hour
Ridership
Estimates

Transit Line	Potential Ridership							
	10%		35%		75%		100%	
	AM	PM	AM	PM	AM	PM	AM	PM
Green	5	5	16	16	34	35	45	47
Orange	44	47	158	166	339	355	452	473
Commuter	19	20	65	68	140	146	186	195
TOTAL	68	72	239	250	513	536	683	715

TABLE IV-5
Zone 2
Peak Hour
Ridership
Estimates

Transit Line	Potential Ridership							
	5%		20%		40%		100%	
	AM	PM	AM	PM	AM	PM	AM	PM
Green	1	1	4	4	7	8	18	19
Orange	9	9	36	37	72	75	181	187
Commuter	4	4	15	15	30	31	75	77
TOTAL	14	14	56	57	109	114	274	283

TABLE IV-6
Zone 3
Peak Hour
Ridership
Estimates

Transit Line	Potential Ridership					
	5%		10%		100%	
	AM	PM	AM	PM	AM	PM
Green	1	1	1	1	13	12
Orange	7	6	14	13	135	129
Commuter	3	3	6	5	55	53
TOTAL	11	10	21	19	203	194

TABLE IV-7
Combined
Potential
Peak Hour
Ridership
Estimates

	Scenario 1			Scenario 2			Scenario 3		
	AM	PM	Total	AM	PM	Total	AM	PM	Total
North Station	643	669	1,312	305	316	621	82	86	168

Long Wharf to Fan Pier

Calculation of ridership along this leg was completed using the same assumptions as the previous section. As calculated in the Traffic and Parking Section of the Final EIR,the ridership on the Blue Line represents 9% of the total transit ridership to the Fort Point Channel Development area. Table IV-8 calculates the potential ridership to the three designated Fort Point Channel zones from the Long Wharf Inner Harbor Ferry stop. Table IV-9 computes the combined ridership for the three scenarios.

TABLE IV-8
Blue Line
Ridership

Zone	Percentage Totals					
	5	10	20	35	75	100
One						
AM	-	27	-	95	203	271
PM	-	28	-	99	213	284
Two						
AM	5	-	22	44	-	109
PM	6	-	22	45	-	112
Three						
AM	4	8	-	-	-	81
PM	4	8	-	-	-	78

TABLE IV-9
Combined Potential Ridership

	Scenario 1			Scenario 2			Scenario 3		
	AM	PM	Total	AM	PM	Total	AM	PM	Total
Blue	255	266	521	121	125	246	32	34	66

Fan Pier to Long Wharf

According to the data in the Final EIR Traffic and Parking Chapter, the Fan Pier and Pier 4 Developments will generate approximately 417 transit trips outbound during the AM peak hour. While there is no data on the destination of these trips, the assumption is that this volume includes riders on rapid transit, commuter bus, commuter rail, and commuter boat. Since no commuters were assigned to walking in the EIR analysis, this number must also include those residents of the Fan Pier and Pier 4 Developments who work in downtown office buildings. Potentially, anywhere from 25% to 50% of these commuters would benefit from the Inner Harbor Ferry connection to Long Wharf. For purposes of this analysis, 40%--or 167--of these riders might use the ferry. Table IV-10 calculates this total ridership into scenarios comparable to those used in the previous calculations.

TABLE IV-10
Fan Pier to Long Wharf Ridership

Scenario	Peak Hour Passengers
One	167
Two	84
Three	25

Clippership Wharf to Long Wharf

The proposed Clippership Wharf Development located in East Boston will incorporate 400 dwelling units. As analysed in the Final EIR for the Clippership Wharf project, occupants of these units will generate 120 transit trips during the AM peak hour. The vast majority of these trips--80%--were assigned to the Blue Line Maverick station inbound. Given the nature of this development, the speed with which the over sea route from Clippership to Long Wharf can be run, and the possibility of other East Boston residents using the system, usage of the Inner Harbor Ferry by these commuters will most likely be quite high. For purposes

of this analysis, 75% of these inbound trips--or 70 commuters--are expected to ride the ferry. Table IV-11 computes the scenario ridership for this Inner Harbor Ferry link.

TABLE IV-11 Clippership Wharf to Long Wharf Ridership

Scenario	Peak Hour Passengers
One	70
Two	35
Three	11

Charlestown Navy Yard to Long Wharf

The last component calculated for the Inner Harbor Ferry potential ridership is also the most hypothetical. Planning for the Navy Yard residential developments is far from complete, leaving a number of unknowns concerning occupancy figures, commuters, and transit trips. However, an estimated 7,000 workers are expected to live in the new Navy Yard developments. Of this total, approximately 40% can be expected to work in the Long Wharf vicinity. For these workers, the shuttle will be by far the most efficient and timely connection, considering the lack of alternate transportation modes. Therefore, 100% of these downtown trips daily are assigned to the ferry for this analysis. Typical transit analysis assigns 12% of the total daily trips to each peak hour. For the Navy Yard, this calculation results in 336 commuters assigned to the Inner Harbor Ferry during the AM peak hour. The scenario totals for this link are listed in Table IV-12.

TABLE IV-12 Charlestown Navy Yard - Long Wharf Ridership

Scenario	Peak Hour Passengers
One	336
Two	168
Three	51

Ridership Summary

Table IV-13 presents the ridership totals during the maximum peak hour for the routes examined, as estimated in the previous sections. The three ridership

scenarios for each route were developed to account for the varying levels of predicted ridership to the Fort Point Channel area. For each of the other ferry links, ridership is assumed to be a constant.

Table IV-13
Total
Peak Hour
Ridership

Link	Scenario One	Scenario Two	Scenario Three
Route A			
No.Sta.-Fan Pier	669	316	86
Fan Pier-No.Sta.		N/A	
Route B			
Navy Yard-Long	336	168	51
Clipper-Long	70	35	11
Long-Clipper		N/A	
Route C			
Long Wharf-Fan Pier	226	125	34
Fan Pier-Long Wharf	167	84	25
TOTAL	1468	728	207

N/A - no ridership estimates

■Route Frequency and Vessel Requirements

Using the previously calculated cycle times and potential ridership counts, the required fleet size at peak hour was determined for each route, as shown in Tables IV-14-22 below. Estimates were made for the three potential passenger capacities (44, 75, and 100) to allow a demonstration of potential system cost. Because the target load on transit vessels is less than the actual capacity, calculations use numbers representing 80% of the capacity for each vessel size. Note: calculations were again computed only for the proposed 10 MPH speed limit.

First, the total number of boat trips needed to accommodate the maximum number of passengers travelling on the system at any one time during the heaviest peak hour is calculated in the fourth column. Then, the length of the peak hour--60 minutes--is divided by the number of total boat trips to arrive at the headway, or route frequency. Finally, the cycle time is divided by the headway and rounded up to the next whole number to determine the maximum number of boats needed in the day.

TABLE IV-14
Route A
Fleet Size
44 Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	38.5	669	19.1	3.2	12
2	"	316	9.0	6.7	6
3	"	86	2.5	24.0	2*

* Although the headway figure suggests that boats will be travelling 24 minutes apart, the cycle time allows for headways of only 20 minutes with a two boat fleet.

TABLE IV-15
Route A
Fleet Size
75 Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	40.0	669	11.2	5.4	8
2	"	316	5.3	11.3	4
3	"	86	1.4	42.9	1

TABLE IV-16
Route A
Fleet Size
100
Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	42.5	669	8.4	7.2	6
2	"	316	4.0	15.0	3
3	"	86	1.1	54.5	1*

* Although the headway figure suggests that boats will be travelling 55 minutes apart, the cycle time allows for headways of only 42 minutes with a one boat fleet.

TABLE IV-17
Route B
Fleet Size
44 Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	37.5	406	11.6	5.2	8
2	"	203	5.8	10.3	4
3	"	62	1.8	33.3	1

TABLE IV-18
Route B
Fleet Size
75 Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	39.0	406	6.8	8.8	4
2	"	203	3.4	17.6	2
3	"	62	1.0	60.0	1*

* Although the headway figure suggests that boats will be travelling 60 minutes apart, the cycle time allows for headways of only 39 minutes with a one boat fleet.

TABLE IV-19
Route B
Fleet Size
100
Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	41.5	406	5.1	11.8	4
2	"	203	2.5	24	2
3	"	62	1.5	40	1

TABLE IV-20
Route C
Fleet Size
44 Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	24.5	433	12.3	4.9	5
2	"	209	6.0	10.0	2
3	"	59	1.7	35.3	1*

* Although the headway figure suggests that boats will be travelling 35 minutes apart, the cycle time allows for headways of only 25 minutes with a one boat fleet.

TABLE IV-21
Route C
Fleet Size
75 Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	26.0	433	7.2	8.3	4
2	"	209	3.5	17.1	2
3	"	59	1.0	60.0	1*

* Although the headway figure suggests that boats will be travelling 60 minutes apart, the cycle time allows for headways of only 26 minutes with a one boat fleet.

TABLE IV-22
Route C
Fleet Size
100
Passengers

Scenario	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
1	28.5	433	5.4	11.1	3
2	"	209	2.6	23.1	2
3	"	59	0.7	85.7	1*

* Although the headway figure suggests that boats will be travelling 86 minutes apart, the cycle time allows for headways of only 29 minutes with a one boat fleet.

Analysis of the calculated vessel requirements reveals a significant variation in the potential ferry schedule and system cost depending on the size of the vessel used.

OFF PEAK SYSTEM

Details of the operation of the off-peak portion of the Fan Pier intermodal ferry are reliant, to a much greater extent than in the case of the peak period system, on the early market response from system users. However, the analysis of this system assumes a reasonable demand for, or interest in, the selected stops by users other than commuters. Sandwiched between the peak period operation, the off-peak route would be run between 9:30 AM and 3:15 PM. Also, since riders, especially tourists and visitors using the service, cannot be assigned specifically to a particular route, Routes B and C have been combined for analysis here.

■ Ridership Levels

Two components must be figured into the off-peak ridership levels. First are those people who, as calculated in the Final EIR Traffic and Parking section, can be expected to travel on the targeted transit lines (Orange Line North, Green Line North, and Commuter Rail to North Station, and Blue Line North) to the Fort Point Channel area during the off-peak hours. Table IV-23 is a breakdown of the total off-peak transit riders to the Fort Point Channel area by development. Note: The North Station total includes Green Line, Orange Line, and Commuter Rail riders.

TABLE IV-23
Off-Peak Public Transit Ridership

Development	North Station Total	Blue Line	Total
Fan Pier	128	50	178
Pier 4	49	19	68
CC&F	27	11	38
Pier 5	15	6	21
Pier 6	5	2	7
Commonwealth Flats	18	7	25
TOTAL	242	95	337

For the following analysis, the North Station riders have been assigned to Route A, while the Blue Line riders are assigned to Route B/C (Figures III-12, 13, and 14). Similar off-peak transit figures were not available for the non-Fan Pier links in the Inner Harbor Ferry System.

Another component in the off-peak ridership that can be estimated is the volume of visitors and tourists that might choose to ride the ferry to one of the cultural institutions located along the ferry route. As discussed earlier, the off-peak system has been planned to serve primarily tourists, museum patrons, and other non-work-related visitors to the Fort Point Channel area. In addition to linking the developments to downtown transit nodes, the ferry will be acting as an innovative excursion service to a range of major downtown and area attractions.

The estimate of this volume must be gross. Although best estimates suggest that few museum-goers visit more than one attraction in one day, the existence of a link that is in itself an attraction (as the ferry is intended to be) may well change visitor habits. Nor does the modal split information gathered by the target museums specify which lines are used by the transit riders and, therefore, the percentage of visitors that would consider the ferry a direct link to South Boston. Annual visitor figures and estimated mode splits for the most likely destinations of off-peak ferry riders are listed in Table IV-24, below.

TABLE IV-24
Annual Visitors for Target Operations

Location	Annual Visitors 1986	Mode Split
ICA/Fan Pier	43,800*	N/A
Children's Museum	500,000	40%
Computer Museum	85,000	40%
Boston Tea Party Ship	400,000	N/A
New England Aquarium	1,106,361	40%
U.S.S. Constitution	573,872	N/A
TOTAL	2,709,033	

TABLE IV-24 (cont.)

* ICA visitor figures are for the present Boylston Street location and are expected to increase at the expanded Fan Pier facility.

SOURCE: Department of Commerce and Development, Division of Tourism and individual institution surveys.

Assuming a transit use by visitors to the listed institutions of approximately 40%, 5% of the total visitors were assigned to travel on the Inner Harbor Ferry. To calculate a per hour ridership for the ferry, the annual visitorship was divided by 250 (representing the average days of operation for each of these institutions) and then by 8 (representing the hours of operation each day). With these assumptions, the per hour use of the Inner Harbor Ferry by visitors and tourists is estimated to be 67. These riders have been assigned to Route B/C.

Using the same basic scenario set-ups as used in the peak hour calculations, the total off-peak riders for each route were assigned to scenarios, as shown in Table IV-25.

TABLE IV-25 Off-Peak Ridership Estimates

	Scenario 1	Scenario 2	Scenario 3
Route A	242	121	36
Route B	162	81	24

■ Route Frequency and Fleet Size

Route frequency and fleet size were calculated using the same methods used in the peak hour calculations. Table IV-26 calculates the ridership on Routes A and B/C of the Inner Harbor Ferry during the off-peak hours. Note: due to the much reduced volume of traffic during the off peak hours, calculations were only completed using 44 passenger capacity boats. Larger boats would most likely not be necessary at this level of service.

TABLE IV-26 Off-Peak Fleet Size

Route	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
Route A					
1	68.1	242	6.9	8.7	8
2	"	121	3.5	17.1	4
3	"	36	1.0	60.0	1

TABLE IV-26
Off-Peak
Fleet Size

Route	Cycle Time	Estimated Passengers	Required Boat Trips	Headway	Boats Needed
Route B/C					
1	63.1	162	4.6	13.0	5
2	"	81	2.3	26.1	3
3	"	24	0.7	87.0	1

COST

A series of pro forma analyses were generated to study the cost feasibility of the Inner Harbor Ferry. In order to determine what combination of public/private investment would be most appropriate for the shuttle system, an attempt was made to figure the breakeven fares for each level of ridership potential, fleet size, and vessel size. Annual operating costs were assembled from data available from boat operators and manufacturers for each of the boat sizes under consideration: 44, 75, and 100 passenger capacities.

Table IV-27 presents, in 1986 dollars, the annual operating cost for each vessel type. Both the marketing and overhead costs are estimated at 10% of the annual operating costs, while the fuel costs were calulated at a round trip, rather than annual rate. Each of these additional costs are figured into the pro forma tables.

TABLE IV-27
Annual
Operating
Costs
(1986 Dollars)

	Passenger Capacity 44	75	100
BOAT AMORTIZATION	16,688	22,250	27,813
CREW SALARIES			
Captain	25,000	25,000	25,000
Mate	15,000	15,000	15,000
Second Mate	------	12,000	12,000
Fringe Benefits	9,000	12,740	12,740
SUBTOTAL	49,000	64,740	64,740
MOORING FEES			
Overnight	840	1,000	1,160
Stopping	420	500	580
SUBTOTAL	1,260	1,500	1,740
INSURANCE	23,000	35,000	40,000
MAINTENANCE	40,000	40,000	40,000

TABLE IV-27
(Cont.)

	Passenger Capacity 44	75	100
FUEL	15,750	22,500	28,125
MARKETING	14,650	18,599	20,242
OVERHEAD	14,650	18,599	20,242
TOTAL OPERATING COSTS	175,797	223,189	242,902
*Amortization assumes:			
Capital Cost	150,000	200,000	250,000
Down Payment	20%	20%	20%
Mortgage	120,000	160,000	200,000
Period	15 yrs.	15 yrs.	15 yrs.
Interest Rate	11%	11%	11%

Pro Formas

The annual operating costs calculated above were used to run a series of pro forma analyses for the Inner Harbor Ferry service. Given the ridership levels and, therefore, the number of boats needed for each of the three scenarios presented previously, costs for each scenario were projected. As shown in Table IV-28, the number of boats needed for the three scenarios was multiplied by the annual operating costs for 44, 75, and 100 passenger boats to find the total annual operating costs for the system at the selected ridership level.

TABLE IV-28
Pro Forma
Summary

Number of Boats	Total Costs 44 Passenger	75 Passenger	100 Passenger
1	176,000	223,000	243,000
2	352,000	446,000	486,000
3	527,000	670,000	729,000
4	703,000	893,000	972,000
5	879,000	1,116,000	1,215,000
6	1,055,000	1,399,000	1,457,000
7	1,231,000	1,562,000	1,700,000
8	1,406,000	1,786,000	1,943,000
9	1,582,000	2,009,000	2,186,000
10	1,758,000	2,232,000	2,429,000
11	1,934,000	2,455,000	2,672,000
12	2,110,000	2,678,000	2,915,000
13	2,285,000	2,901,000	3,158,000
14	2,461,000	3,124,000	3,401,000
15	2,637,000	3,348,000	3,644,000
16	2,813,000	3,571,000	3,887,000

TABLE IV-28 (cont.)

Number of Boats	Total Costs 44 Passenger	75 Passenger	100 Passenger
17	2,989,000	3,794,000	4,129,000
18	3,164,000	4,017,000	4,372,000
19	3,340,000	4,241,000	4,615,000
20	3,516,000	4,464,000	4,858,000
21	3,692,000	4,687,000	5,101,000
22	3,868,000	4,910,000	5,344,000
23	4,043,000	5,133,000	5,587,000
24	4,219,000	5,357,000	5,830,000
25	4,395,000	5,580,000	6,073,000
30	5,274,000	6,696,000	7,287,000

■Breakeven Fares

The final step in the financial analysis for the Inner Harbor Ferry was to calculate the breakeven fare for each of the three scenarios, as presented in Table IV-29. The annual operating cost for the varying levels of service are factored together with the number of AM and PM peak hour passengers, the total number of off-peak passengers per day, and the number of days of operation per year.

NOTE: The following assumptions were made in calculating the breakeven fares for the Inner Harbor Ferry service:

- o All boats are filled to 80% capacity.
- o All routes are running on the same ridership scenario for each set of calculations.
- o The Inner Harbor Ferry operates 250 days per year for both peak hour and off-peak service.
- o For each fare calculation, all boats in the system are the same length and carry the same number of passenger.
- o The number of boats in the system is determined by the peak hour demands.
- o Fares are determined system-wide, regardless of the length of the passenger trip.

TABLE IV-29
Breakeven Fares

	Boats Needed	Annual Cost	Peak Hour Passengers	Fare
Scenario 1				
44 Capacity	25	4,394,935	7056	2.49
75 Capacity	16	3,571,016	7056	2.02
100 Capacity	13	3,157,016	7056	1.79
Scenario 2				
44 Capacity	12	2,109,569	3476	2.43
75 Capacity	8	1,785,000	3476	2.05
100 Capacity	7	1,700,312	3476	1.96
Scenario 3				
44 Capacity	4	703,190	1014	2.77
75 Capacity	3	669,566	1014	2.64
100 Capacity	3	728,705	1014	2.87

■Observations

The following observations given the breakeven fare calculations were made:

- Increased ridership results in generally lower breakeven fares.
- Larger boat size, assuming constant percent capacity ridership leads to a slightly lower breakeven costs. However, a significant trade-off to this generally small fare reduction is a substantial increase in headway time (often double or triple the first headway time).
- The overall range in breakeven fares is approximately $1.10 (low of $1.80 to high of $2.90). In general, fares are approximately double those for MBTA express bus service (e.g., Newton Corner buses) and are triple the base MBTA rapid transit fare of $0.60.
- Further analysis will help to determine the most appropriate mix of boat size and capacity for the three routes studied. Smaller boats, with as low as 25 passenger capacities, may be warranted.
- Additional analysis is needed to determine the effect of operation 365 days per year on the breakeven fares.
- All routes and fares will be subject to further analysis and refinement.

V. NORTH SHORE COMMUTER TRANSPORTATION

INTRODUCTION

This section presents an initial description of the potential for commuter ferryboat connections between the North Shore and downtown/South Boston waterfront destinations. The purpose of this service would be to intercept North Shore automobile commuters to the downtown, and to provide a fast, attractive shuttle service to the downtown.

For purposes of this investigation, the following assumptions have been made:

- Commuter boat service to North Shore coastal sites is not practical (by comparison to the South Shore) because of open sea conditions and the relative distances involved;
- Sites can be identified on the Malden River and Chelsea Creek that have appropriate water frontage, parking supply, and clear vehicular access to major area arterials. It would appear that sites in Everett and Revere might satisfy these criteria;
- The service to be provided is for commuters, focused on morning and evening rush hours;
- In-town destinations could include landings at Long Wharf (or Rowes Wharf), Fan Pier, and possibly North Station; and
- Considering schedule and ridership, the system would probably operate much like the existing South Shore commuter boat system.

Primarily, the North Shore commuter boats would serve as outlying parking/transit nodes to reduce automobile traffic to the downtown. Such a service would compete with other transportation options, including: commuter rail, rapid transit (Orange and Blue Lines), commuter buses, and vanpools and carpools.

RIDERSHIP ESTIMATES

Two separate sets of figures were generated to estimate ridership on a North Shore commuter boat: one set from Fan Pier and Pier 4 Final EIR traffic-related figures, and one set from the 1980 Census Journey-to-Work data.

■Fan Pier/Pier 4 EIR Numbers

Predictions on car trip area distribution to Fan Pier and Pier 4 were made on the basis of a license plate survey. As shown in the Traffic and Parking chapter of the Final EIR, 25% of the vehicle trips to the sites could be attributed to northerly routes running through or adjacent to Everett and Revere. Consequently, 25% of the vehicle trips to the Fan Pier and Pier 4 sites could be expected to travel conveniently close to the proposed Everett facility. Table V-1 is a breakdown of the northerly trips:

TABLE V-1
North Shore Commuters to Fan Pier

Route	Ridership Percentage
Route 1	11%
I-93 north	14%
TOTAL	25%

For the 1995 build-out, 16,500 traffic trips per day are estimated to the Fan Pier and Pier 4 sites. Of these, 1,706 are expected to arrive during the AM peak hour, and 2,072 are expected to leave during the PM peak hour. As indicated in Table IV-1, twenty-five percent of these trips, equalling 518 vehicle trips during the PM peak hour, will leave the Fan Pier site for northbound routes.

To obtain an estimate of the number of North Shore commuters who might use such a ferryboat system, information based on ridership figures for the Hingham system was used. As calculated for the Hingham commuter service, approximately 30% of the commuters to the downtown from towns neighboring the ferryboat site use the water transportation system daily. Therefore, given the above numbers for northerly trips and the estimates on Hingham bost ridership, 1,240 commuters per day--or 155 commuters during the PM peak hour--out

of the total 16,500 vehicle trips to the Fan Pier and Pier 4 sites might reasonably be expected to benefit from implementation of a North Shore ferryboat service.

■Journey-to-Work Data

The Journey-to-Work data calculates the number of persons in any given town travelling to the Boston Central Business District for work each day. Although it is not possible to determine exactly which town would consider using a ferry system departing from Everett, the following are the data from the towns most immediately adjacent to Everett. It seems likely that the system could attract riders from a much greater pool, but those numbers have not yet been gathered. Table V-2 presents the Journey-to-Work figures for the towns surrounding Everett.

TABLE V-2
Journey-to-Work Data

Town	Potential Ferryboat Commuters
Everett	4,994
Chelsea	3,210
Revere	1,679
Saugus*	605
Malden*	1,786
Medford*	1,984
TOTAL	14,258

* Due to the geographical distribution of these towns' populations, only 25% of the total C.B.D. commuters were factored into the Journey-to-Work Total. The remaining commuters are considered to live too far from the potential ferry dock site to take the boat.

To obtain an estimate on the number of these commuters who might use the Everett system, two assumptions were factored in. First, according to data obtained for the Hingham system, approximately 30% of the commuters living in the towns neighboring Hingham and commuting to the Central Business District had been found to take a Hingham commuter boat. Secondly, transit analysis assumed that 55% of the total daily trips by office workers occur during the PM peak hour. Therefore, a number representing 30% of the total 14,258 and 55% of that number was used as the estimated trips on the water shuttle from Everett during the PM peak hour. As calculated, the estimated number of North Shore commuters riding this system during the PM peak hour would be 2,352, and 4,277 commuters throughout the day. Added to the Final EIR estimate of 155 commuters to the Fan Pier and Pier 4 Projects, the total for the proposed North Shore system would be 2,507.

CYCLE TIMES

Although there are no calculated estimates of the travel time to Everett (and it seems difficult to obtain an estimate without an agreed upon landing), cycle times were calculated by assuming a 12 minute trip from Long Wharf to Everett. Table V-3 on the following page below calculates the travel time and cycle time for a Fan Pier-Long Wharf-Everett trip.

TABLE V-3
North Shore
Travel Time

Leg	Travel Time	Loading Time	Cycle Time
Fan Pier-Long Wharf	6.5	5	13
Long Wharf-Everett	12.0	5	20
Everett-Long Wharf	12.0	5	20
Long Wharf-Fan Pier	6.5	5	13
TOTAL	37.0	20	66

FLEET SIZE

As in the Inner Harbor Ferry feasibility section, fleet size (and, therefore, dockage requirements) were calculated (see Table V-4) using the same assumption and principles used in calculating the needs of the shuttle bus system in the Final EIR.

TABLE V-4
North Shore
Service
Fleet Size

Passenger Trips*	Vehicle Trips	Headway	Average Load**	Cycle Time	Boats Needed
2,507	6.3	9.5	500	66	7

* Passenger Trips equals 2,352 (number calculated from Journey-to-Work data) plus 43 (number calculated from Fan Pier EIR data).

** A 500 passenger capacity boat was used for the calculations simply because it is the vessel capacity most often mentioned in discussions concerning the Everett service.

VI. CONCLUSIONS

Following is a list of summary conclusions drawn from this study.

- The Fan Pier Developers have committed to providing a boat dock on-site for commercial ferryboat use. This dock, located at the southwestern corner of the Fan Pier site, has been designed to accommodate a wide range of traditional and innovative passenger ferryboats, including those currently in use in Boston Inner Harbor.

- Water transportation is presently being provided in Boston Harbor for special purpose use, including: South Shore commuter transport, airport transport, Harbor Island visits, and excursions.

- There are multiple transportation needs in the Boston Harbor area, several of which could be served by additional water transportation services:

  - Peak hour, short-hop commuter connections between waterfront development areas and existing public transit nodes. Portions of that service would be best provided on an express basis;

  - Peak hour commuter connections between North Shore sites and the downtown area, comparable to the South Shore commuter service; and

  - Off-peak and weekend connections between commercial, residential, and cultural facilities.

- A series of transportation nodes and other sites exist with good road and/or transit and water access that could be used for landings.

- A number of good landing sites in the Inner Harbor combine residential uses and cultural/recreational facilities.

- Transportation needs within the Harbor are varied, based on the commuter's perception of the role of the water link in the journey to work. This suggests that the functional requirements to serve these transportation needs are distinct:

  - Express service from more distant locations to employment destinations in the downtown area;

  - One-stop or two-stop service to the downtown waterfront for Inner Harbor residents living near the waterfront; and

  - Multi-stop service for off-peak excursion trips to cultural resources.

- Decisions concerning size of vessels and headways are interlinked with projections for ridership and the marketing approach for each system. There are several possible combinations of vessel size and headways appropriate for each system, based on ridership and travel time.

- Costs for each of the proposed systems are determined by such factors as fleet size, crew, insurance, operations and maintenance, fuel, and storage.

- Provision of landings and landside facilities that can be used by any new or existing services will be incorporated into the plans for Pan Pier. Other downtown landings in the proposed system are in the planning or construction phases and are being investigated by a number of public and private entities. To date, the North Shore commuter system landings have not been fully evaluated.

- Provision, maintenance, and management of landings should be determined on a site-by-site basis. To the extent that land is in public ownership, construction, maintenance, and management should run to the appropriate public agency. Where lands are privately owned or developed, responsibility for construction, maintenance, and management should run to the land owner(s).

- Provision, operations, and maintenance of vessels is the appropriate responsibility of private operators.

- A state transportation agency should oversee the provision of water transportation service, and should assist in establishing harbor-wide support facilities for boat operators. In addition, this agency should lead the process of routing, scheduling, coordination, and marketing.

VII. Letters of Interest

The attached letters from Alan D. Circeo, Captain of A.C. Cruise Line, the excursion boat operation located on the Fan Pier site, and Daniel W. Fulham of John N. Fulham & Sons, a ice, fuel, and ship services business neighboring the Fan Pier and Pier 4 Development sites on Northern Avenue, express interest in and support for the on-going efforts of the Fan Pier and Pier 4 Developments to encourage water transportation in the Boston Inner Harbor.

A.C. CRUISE LINE

28 NORTHERN AVENUE BOSTON, MASSACHUSETTS 02210 (617) 426-8419

CAPTAIN ALAN CIRCEO

9 March 1987

Mr. John Hall
H. B. C. Associates
600 Atlantic Avenue, Suite 2100
Boston, MA 02110

Dear John,

Relative to the Study on Water Transportation in Boston Harbor that you are doing in reference to the Fan Pier Project:

A. C. Cruise Line, Inc. feels that there is a positive future to Water Shuttles and on demand Water Taxis in the Inner Harbor as proposed. There remains a need for the City of Boston to provide landing areas in various places around the harbor before this can take place. I suppose this can happen through developments such as yours.

When there are landings available, I feel free enterprise will provide the service in the summer months but for year round service, there may be a need for a subsidy of some kind.

A service of this type should certainly help to alleviate street traffic and also move people point to point a lot quicker than one can go by surface travel as evidenced by the Airport Water Shuttle.

A. C. Cruise Line, Inc. remains as always, ready to assist H.B.C. and Carpenter Companies in your endeavors in this area.

Sincerely yours,

ALAN D. CIRCEO, Captain

JOHN N. FULHAM & SONS, INC.

253 NORTHERN AVENUE
BOSTON, MASSACHUSETTS 02210
617-542-0802

January 27, 1987

James S. Hoyte, Secretary
Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

RE: Support for Fan Pier/Pier 4 Projects
Final Environmental Impact Report EOEA No. 4426/4584

Dear Secretary Hoyte:

We are Northern Avenue neighbors of the proposed Fan Pier and Pier 4 projects. Our business is located on the Fish Pier which is east of Pier 4 where we are engaged in the ice, fuel and ship services business serving Boston and New England. We have followed the progress of development planning for Fort Point Channel for years, and wish to express our strong support for these projects. The development of the Fan Pier and Pier 4 are necessary to anchor and make feasible the revitization of the harborfront in South Boston. Accordingly, we are writing to urge you to certify the adequacy of Final Environmental Impact Report, and to do everything possible to promote the prompt approval of these projects.

These projects represent $1 billion of private investment, an opportunity which must not be lost. With the construction of these projects, (sites which today are deteriorating and underutilized as parking lots), the area will be transformed into a vital, publicly-accessible, urban waterfront.

We are particularly supportive of those aspects of the plans which will introduce new water-dependent uses and jobs to the area. As proposed, these include a 10-acre marina protected by two substantial breakwaters, an on-demand water taxi service, and a coastal cruise ship landing -- all firsts for Boston harbor.

The developers of the Fan Pier and Pier 4 have asked our advice about these water-dependent uses. Our company has a 75-year history on this waterfront, and we currently represent a number of operators within the burgeoning coastal cruise ship industry. Our company has encouraged the developers to provide water-dependent amenities, outlined requirements for the coastal cruise ship landing, and suggested prospective candidates for marine-related employment. It is our belief that once the Fan Pier and Pier 4 are developed, water transportation will at last become feasible throughout the Inner Harbor.

Needless to say, there are many other public benefits associated with these projects. Well over half the area sites will be devoted to public open space, and the plans include a mile-and-a-half extension of Harborwalk. Together with the marina, water taxi service, excursion boat landing, and coastal cruise ship landing, these features will activate and animate the area, making it possible for the public to fully appreciate and enjoy the waterfront as never before in Boston.

The proponents have repeatedly demonstrated their concern for traffic impacts. The traffic impacts, it seems clear, can be mitigated by a combination of highway improvements, bus and water transit, and limited parking availability during the commuter rush hours, without significant disturbance to existing South Boston businesses and residents. The water quality will be protected through the construction of new sanitary and storm water sewers. The combined effect of these improvements will help to improve water quality in Boston Harbor.

As neighbors on the South Boston waterfront, we strongly support the Fan Pier and Pier 4 projects. These projects are critical to sustaining the strength of the regional economy, to securing unparalleled private investment for the transformation of an underutilized area of the waterfront, and to encouraging the creation of new water-dependent uses in Boston harbor.

Please certify that the Final EIR is adequate and support further review of these projects by other state agencies.

Respectfully submitted,

Daniel W. Fulham

DWF:tb

ACCOPRESS®

25070	YELLOW
25071	BLACK
25072	LIGHT BLUE
25073	DARK BLUE
25074	LIGHT GRAY
25075	LIGHT GREEN
25076	DARK GREEN
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25078	RED
25079	EXECUTIVE RED

ACCO INTERNATIONAL INC
CHICAGO, ILLINOIS 60610